

# **SCGH Brownes Cancer Support Centre Patient Care Report**

**August 2004**

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# CONTENTS

<b>LIST OF APPENDICES</b>	<b>iv</b>
<b>LIST OF TABLES</b>	<b>iv</b>
<b>LIST OF FIGURES</b>	<b>v</b>
<b>INTRODUCTION</b>	<b>1</b>
<b>RESULTS</b>	<b>1</b>
Sample	1
Age and gender	1
Participant category	2
Hospital	2
Medical history	3
Cancer treatment	3
Type of cancer	3
Cancer spread and site	5
Additional information	5
Interests	5
Health history	6
Therapies	7
Symptom distress	8
Quality of life	10
Reliability	12
Satisfaction	12
Additional questions	12
Comments and suggestions	13
<b>PARTICIPANTS WITH CANCER</b>	<b>14</b>
Demographics	14
Overall and individual symptom distress	14
Comparing therapies for pain and fatigue	18
Reliability and validity	18
<b>DISCUSSION</b>	<b>18</b>
Profile	18
Treatment	19
Quality of life	19
<b>CONCLUSION</b>	<b>19</b>

## APPENDICES

A	Interests	20
B	Comments	26

## LIST OF TABLES

1	Frequency and percentage of participants' attendance at each hospital	2
2	Number of participants receiving the different cancer treatments	3
3	Other types of cancer	4
4	Health history	6
5	Types of therapy accessed	7
6	Mean scores for the overall symptom distress scores at each assessment	8
7	Mean and standard deviation of physical symptoms at each assessment	8
8	Mean ranks for the symptom distress scores across the five assessments	9
9	Mean scores for the overall quality of life score across the five assessments	10
10	Mean and standard deviation of quality of life scores across the five assessments	10
11	Mean ranks for QOL scores across the five assessments	11
12	Cronbach's alpha coefficient estimates for SDS and QOL at five time points	12
13	Mean and standard deviation scores for the overall Symptom Distress Scores for each of the five assessments for participants with cancer	14
14	Means and standard deviations of physical symptoms at each assessment for participants with cancer	14
15	Mean ranks for the symptom distress scores for participants with cancer	15
16	Mean scores for the overall quality of life score for each of the five assessments for participants with cancer	16
17	Means and standard deviations of quality of life scores for each of the five assessments for participants with cancer	16
18	Mean ranks for the quality of life scores for participants with cancer	17
19	Cronbach's alpha coefficient estimates for SDS and QOL at five time points for participants with cancer	18

## LIST OF FIGURES

1	Number of participants recorded at the three visits	1
2	Participant category	2
3	Medical history	3
4	Type of cancer	4
5	Site of cancer spread	5
6	Symptom mean for each assessment	9
7	Quality of life mean for each assessment	11
8	Degree of agreement to questions 1 to 5.	12
9	Physical symptom means for each assessment for participants with cancer	15
10	Quality of life mean for each assessment for participants with cancer	17

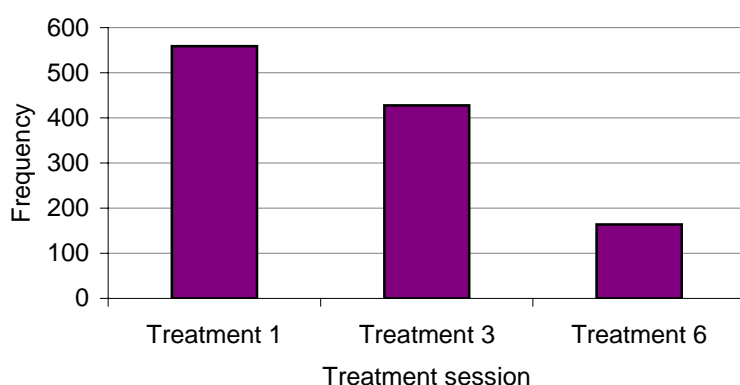
## INTRODUCTION

This report summarises results of participants seen at the Sir Charles Gairdner Hospital (SCGH) Brownes Cancer Support Centre over a 17 month period between August 2002 and January 2004. Participants receiving treatments completed a consultation form to provide demographic data. On arrival at their first treatment, participants completed a pre-treatment questionnaire, and then received their first treatment, which could be any one of approximately 17 complementary therapies. Prior to their third treatment, participants completed a pre-treatment questionnaire and completed the same form following their third treatment. Participants followed this same procedure on receiving their sixth treatment. The time period between the three treatment visits varied across participants.

## RESULTS

### Sample

Five hundred and sixty-four people visited the Centre in this 17 month period and reported a total of 1,151 treatments. Data was recorded for 559 participants at pre treatment 1 (pre 1), 428 at treatment 3, and 164 at treatment 6, see Figure 1. Pre and post data were not always recorded for each participant at each session, with 369 participants completing both pre treatment 3 (pre 3) and post treatment 3 (post 3) questionnaires, and 122 completing the pre treatment 6 (pre 6) and post treatment 6 (post 6) questionnaires. To date, 369 participants have completed the pre 1, pre 3, and post 3 questionnaires, and 122 have completed the complete set of five forms.



**Figure 1: Number of participants recorded at the three visits**

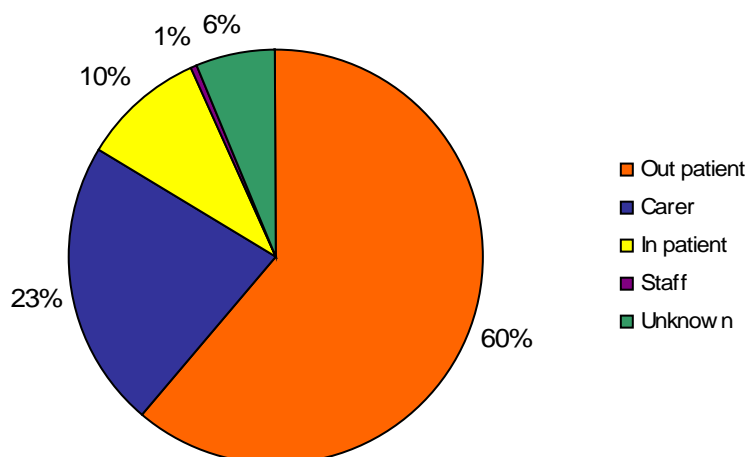
### Age and gender

Over three-quarters (85%, N=479) of the 564 participants were female. The ages of participants were obtained for 518 (91.84%) of the 564 participants. For these 518, the age ranged from 17 to 85 years of age, with a mean age of 55 years ( $\underline{M} = 54.63$ ,  $\underline{SD} = 12.72$ ).

Of the 85 males, 80 (90%) reported their age, with the mean age being 55 ( $\underline{M} = 55.42$ ,  $\underline{SD} = 12.78$ ), whilst the mean for the 438 (N = 479, 78%) females reporting their age was 54 ( $\underline{M} = 54.48$ ,  $\underline{SD} = 12.72$ ).

## Participant category

The 564 participants were categorised as either patient (inpatient or outpatient), carer, staff, or unknown (if the category was not known), with the majority (N=344, 61%) of participants being outpatients. Note that “patients” includes a small number of participants that do not have cancer, but have other diagnoses, and that participants with cancer included not only patients, but also carers, and participants recorded as “unknown”. Consequently, of the 564 participants, 420 (74%) are recorded as having cancer or being treated for cancer. Figure 5 below illustrates the percentage of people in each participant category.



**Figure 2: Participant category**

## Hospital

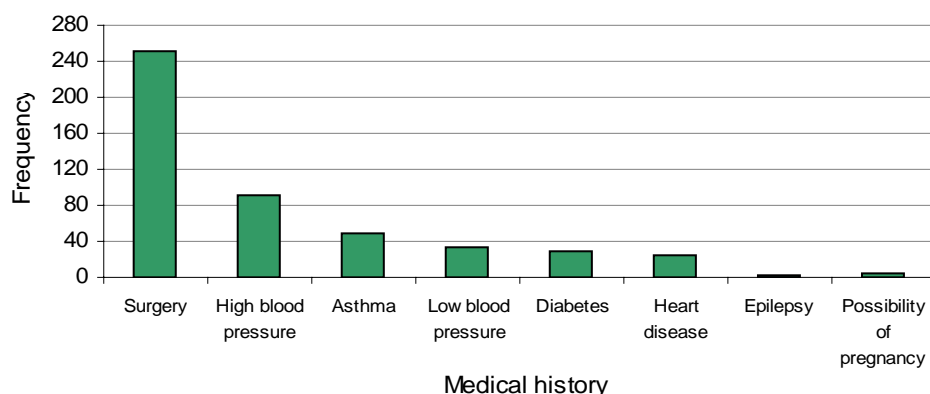
Of the 421 participants who reported the hospital that they were attending, 292 (69%) attended Sir Charles Gardiner Hospital, with the remaining 129 (31%) attending a range of other hospitals, as shown in Table 1 below.

**Table 1. Frequency and percentage of participants' attendance at each hospital**

Hospital	Frequency	Percentage
1. Sir Charles Gardiner Hospital	292	69.36
2. Royal Perth Hospital	35	8.31
3. St John of God Hospital	33	7.84
4. Mount Hospital	28	6.65
5. King Edward Memorial Hospital	5	1.19
6. Hollywood Private Hospital	4	.95
7. Fremantle Hospital	3	.71
8. Princess Margaret Hospital	1	.24
9. Other	20	4.75
<b>Total</b>	<b>421</b>	<b>100</b>

## Medical history

Of the eight listed medical conditions, major surgery was listed by 251 (44%) of the 564 participants. Figure 3 below illustrates the frequency of each medical condition.



**Figure 3: Medical history**

Note: Data above represents multiple responses.

## Cancer treatment

Three hundred and eleven (55%) of the 564 participants listed their present/planned treatment with the majority reporting that they were receiving chemotherapy and/or radiotherapy.

Of the 311 participants receiving treatment:

201 (65%) listed one treatment;

78 (25%) listed two treatments; and

32 (10%) listed three treatments. Table 2 below illustrates the number of participants receiving each of the listed treatments.

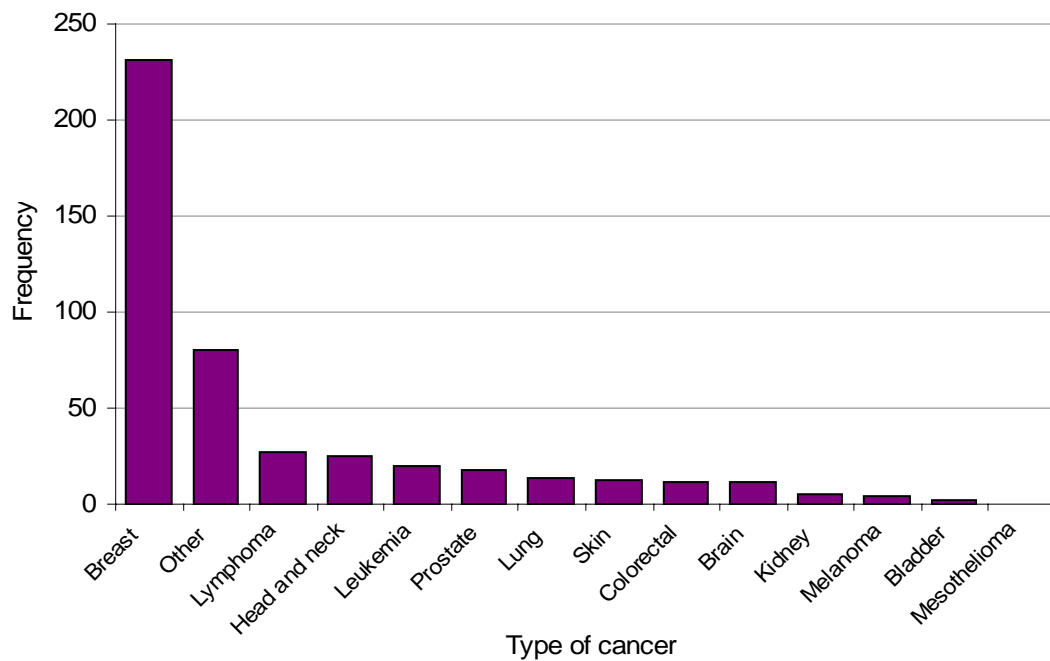
**Table 2. Number of participants receiving the different cancer treatments**

Treatment	Total	One treatment	Two Treatments	Three treatments
Chemotherapy	166	82 (49%)	56 (34%)	28 (17%)
Surgery	76	17 (22%)	30 (40%)	29 (38%)
Radiotherapy	191	95 (50%)	66 (34%)	30 (16%)
Other	20	7 (35%)	4 (20%)	9 (16%)
Total	453	201	156	96

## Type of cancer

Four hundred and twenty participants reported that they had cancer, with 418 (99%) participants reporting the type of cancer. Of these 418 participants, 380 (90.91%) named one type of cancer, 35 (8.37%) named two, two (.35%) named three and one (.18%) named four. The most frequent type of cancer represented in this cohort was “breast cancer” (N = 231, 55.26%). See Figure 4 below for the distribution of types of cancer. Eighty (19.14%) participants reported a different type of cancer (“Other”) to that listed in the questionnaire, and these are presented in Table 3 below.





**Figure 4: Type of cancer**

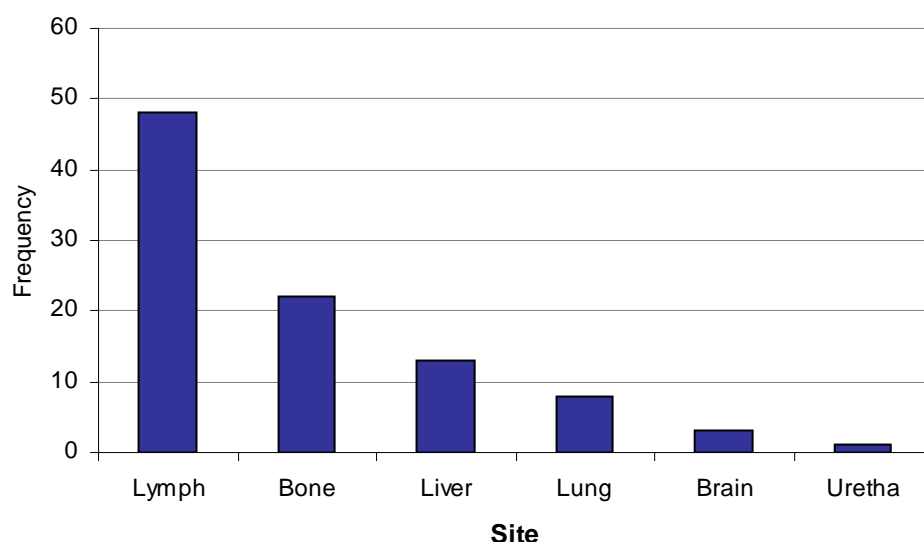
Note: "Skin" represents non-melanoma skin cancer, and data represents multiple responses

**Table 3. Other types of cancer**

Type of cancer	
Abdomen; Abdominal	Myeloma; Multiple myeloma
Adenocarcinoma	Neuro-endocrine tumor
Bone; Bone – Ewing's disease	Ocular right side
Bowel; Bowel / Liver	Oesophagus
Brain stem; throat	Osteo sarcoma right hip
Cervical; Cervix	Ovarian; Ovarian/bowel; Ovarian & stomach
Chest cavity, behind heart; Chest	Pancreas; Pancreatic
Crygloben Anemia	Pituitary
Endometrial	Previous lymph secondaries
Gastro-intestinal stromal tumours	Spinal tumor; Spine
Hodgkin's	Stomach & oesophagus; Stomach
Liver; Liver & adrenal glands	Testicle; Testicular
Lung	Thyroid; Thyroid & lymph nodes
Bone; Bone – Ewing's disease	Tongue
Lymph; Lymph secondaries; Lymph glands; nodes	Ureter; Uterus; Uterine; Uterine sarcoma; Uterus & cervix

## Cancer spread and site

Of the 420 participants that had cancer, 109 (26%) reported that their cancer had spread. Details of the site of the cancer spread were given in 84 (77%) of these 109 cases, and is presented in Figure 5 below. The cancer had spread to two sites for ten participants.



**Figure 5: Site of cancer spread**

*Note:* Data above represents multiple responses.

## Additional information

Participants were asked a number of questions relating to their experience at the centre, and their responses are listed below.

- Five hundred and thirty participants (94%) indicated their doctor could be notified by the Brownes Dairy Support Centre.
- One hundred and thirty-eight (24%) participants stated they had told their doctor that they were receiving complementary therapy.
- Two hundred and twelve (38%) participants had experienced complementary therapies before.
- Five hundred and fourteen (91%) participants said their consultant could be informed that they were receiving treatment at the centre.

## Interests

Participants were asked about their interests, and responses were obtained from 233 (42%) participants. Interests included art, gardening and reading (see Appendix A for a complete list of responses).

## Health history

Participants completed a health history section of 12 items. The number of participants reporting a health problem is presented below in Table 4. For future would be good to list according to frequency – highest to lowest

**Table 4. Health history**

	<b>Health problem</b>	<b>Frequency</b>
1	Medication prescribed	252
2	Vitamin/herb supplements	174
3	Nervous disorder	167
4	Skeletal or muscular problems	163
5	Allergies	126
6	Skin problems	93
7	Digestive problems	92
8	Respiratory problem	80
9	Preference to any oils	87
10	Aversion to any odours	73
11	Circulatory problems	70
12	Urinary problems	62

*Note:* Data above represents multiple responses.

## Therapies

Of the 17 therapies available, 16 were regularly accessed (relaxation massage has recently become available), and are listed below in Table 4. The therapy most accessed overall for all three treatment visits was Reiki, followed by Aromatherapy (which included massage), and Pranic healing.

**Table 5. Types of therapy accessed**

Therapy types	Treatment 1	Treatment 3	Treatment 6	Total
1 Acupuncture	18	19	8	45
2 Aromatherapy	84	79	39	202
3 Beauty therapy	28	13	2	43
4 Bowen therapy	34	23	16	73
5 Chi Breathing and Chi Meditation	36	13	3	52
6 Counselling	30	15	6	51
7 Cranio-sacral therapy	36	30	6	72
8 Creative art therapy	0	1	0	1
9 Healing breath (Art of living)	4	0	1	5
10 Healing touch	13	9	8	30
11 Kinesiology	11	21	11	43
12 Pranic healing	69	55	16	140
13 Qi gong	3	1	1	5
14 Reflexology	36	44	15	95
15 Reiki	155	105	32	292
16 Support group	2	0	0	2
Total	559	428	164	1,151

## Symptom distress

### ▪ *Overall symptom distress*

The symptom distress scale was comprised of seven items, ranging from “0” (no symptom) to “10” (worst possible symptom). Participants’ overall symptom distress was measured by a sum total of these seven items, with zero being the lowest possible score and 70 being the highest. Table 6 below illustrates the mean of these total scores at each of the five assessments.

**Table 6. Mean scores for the overall symptom distress scores at each assessment**

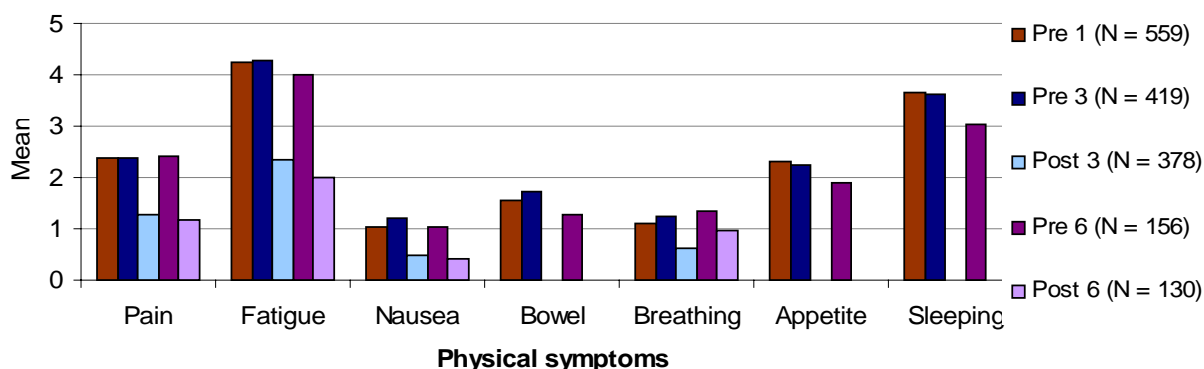
Treatment visit	Mean	Standard deviation
Pre treatment 1 (N = 559)	16.28	11.45
Pre treatment 3 (N = 419)	16.70	12.05
Post treatment 3 (N =378)	4.74	5.22
Pre treatment 6 (N = 156)	14.97	11.37
Post treatment 6 (N = 130)	4.25	4.66

### ▪ *Individual symptom distress*

Table 7 below illustrates the mean scores and standard deviations obtained for each individual item at each of the five assessment times. The mean scores are also presented graphically below in Figure 6.

**Table 7. Mean and standard deviation of physical symptoms at each assessment**

Physical Symptoms	Pre treatment 1 (N = 559)		Pre treatment 3 (N = 419)		Post treatment 3 (N = 378)		Pre treatment 6 (N = 156)		Post treatment 6 (N = 130)	
	M	SD	M	SD	M	SD	M	SD	M	SD
Pain	2.38	2.79	2.39	2.60	1.29	1.96	2.41	2.54	1.17	1.64
Fatigue/Tiredness	4.25	2.82	4.26	2.63	2.34	2.37	4.00	2.56	1.99	2.21
Nausea	1.02	2.12	1.21	2.33	0.49	1.31	1.02	1.90	.40	1.04
Bowel	1.55	2.49	1.73	2.60	n/a	n/a	1.29	2.08	n/a	n/a
Breathing	1.09	2.09	1.25	2.04	.62	1.43	1.33	2.23	.969	1.41
Appetite	2.31	2.92	2.24	2.90	n/a	n/a	1.90	2.51	n/a	n/a
Sleeping	3.67	3.07	3.62	2.93	n/a	n/a	3.03	2.69	n/a	n/a



**Figure 6: Symptom mean for each assessment**

Note: There is no data for the symptoms bowel, appetite, and sleeping at post assessments 3 and 6

▪ **Comparison of symptom distress across the three treatment visits**

A Friedman test was performed on the symptom distress scores obtained from the 122 participants who completed all five assessments. Note that the symptom distress scores for Bowel, Appetite and Sleeping were not recorded in post treatment assessments.

Significant differences were found between participants' reported symptom distress for Pain, Fatigue/tiredness, Nausea and Breathing across the five assessments ( $p < 0.005$ ), and for Sleeping ( $p < 0.05$ ) across the three assessments. This does not appear to be the case for the items Bowel and Appetite. The mean ranks are presented in Table 8 below.

**Table 8. Mean ranks for the symptom distress scores across the five assessments**

N=122	Chi-Square	Pre treatment 1	Pre treatment 3	Post treatment 3	Pre treatment 6	Post treatment 6
Pain*	78.152	3.16	3.50	2.43	3.47	2.44
Fatigue/tiredness*	164.819	3.69	3.73	2.24	3.41	1.93
Nausea*	37.723	3.16	3.27	2.75	3.17	2.65
Bowel	4.447	1.93	2.11	N/A	1.96	N/A
Breathing*	45.940	3.06	3.46	2.70	3.17	2.61
Appetite	2.153	2.05	2.03	N/A	1.92	N/A
Sleeping*	6.552	2.10	2.07	N/A	1.83	N/A

Note: \* denotes significance

To assess the difference in scores between pre test assessments, a Wilcoxon Signed Ranked Test was performed on data from completed assessment forms for pre 1 and pre 3 (N=419), and then for pre 1 and pre 6 (N=156). A comparison of pre 1 and pre 3 assessment scores revealed a trend suggesting improvement in breathing distress ( $p=0.052$ ). A comparison of pre 1 and pre 6 assessments revealed three significant changes over this time period; improvements in fatigue ( $Z = -2.445$ ;  $p < 0.05$ ); appetite ( $Z = -2.118$ ;  $p < 0.05$ ); and sleeping ( $Z = -2.075$ ;  $p < 0.05$ ).

## Quality of life

### ▪ *Overall quality of life*

The quality of life scale (QOL) is comprised of seven items, ranging from “0” (positive feelings) to “10” (negative feelings). Participants’ overall quality of life was measured by a sum total of the seven items in the QOL scale (see Table 9 below).

**Table 9. Mean scores for the overall quality of life score across the five assessments**

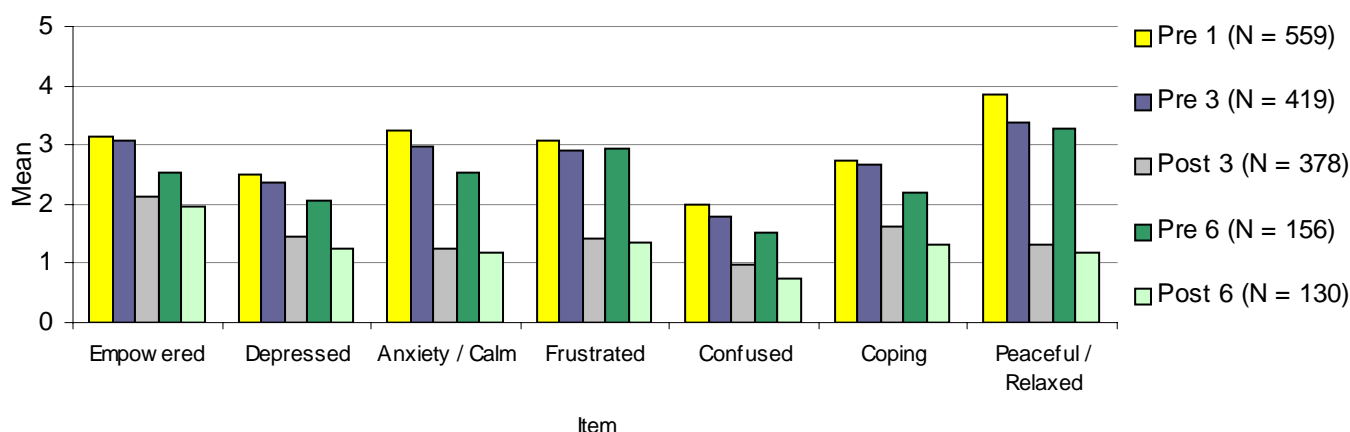
Treatment visit	Mean	Standard deviation
Pre treatment 1 (N = 559)	20.61	17.04
Pre treatment 3 (N = 419)	19.17	16.30
Post treatment 3 (N = 378)	10.20	11.68
Pre treatment 6 (N = 156)	17.04	15.10
Post treatment 6 (N = 130)	9.03	10.52

### ▪ *Individual quality of life*

Table 10 below illustrates the mean scores and standard deviations obtained at each assessment for each of the seven QOL items. The mean scores are also represented in Figure 7.

**Table 10. Mean and standard deviation of quality of life scores across the five assessments**

Physical Symptoms	Pre treatment 1 (N = 559)		Pre treatment 3 (N = 419)		Post treatment 3 (N = 378)		Pre treatment 6 (N = 156)		Post treatment 6 (N = 130)	
	M	SD	M	SD	M	SD	M	SD	M	SD
	Empowered	3.15	3.00	3.07	2.73	2.12	2.27	2.54	2.49	1.97
Depressed	2.51	2.77	2.37	2.62	1.44	2.05	2.07	2.41	1.25	1.85
Anxiety / Calm	3.26	2.92	2.96	2.73	1.26	1.86	2.52	2.51	1.18	1.86
Frustrated	3.08	3.06	2.92	2.97	1.43	2.09	2.94	3.00	1.36	2.20
Confused	2.01	2.78	1.79	2.56	.99	1.79	1.51	2.30	.75	1.39
Coping	2.75	2.80	2.67	2.70	1.63	2.05	2.18	2.48	1.32	1.83
Peaceful / Relaxed	3.86	2.95	3.39	2.78	1.32	1.92	3.28	2.69	1.19	1.77



**Figure 7: Quality of life mean for each assessment**

A Friedman test was performed on the QOL scores obtained from the 122 participants who completed all five assessments. The results of the Friedman test show significant differences between participants' QOL scores for all seven items across the five assessments ( $p < 0.005$ ).

Comparing the ranks for the five sets of scores, participants' reported an improvement in the quality of life items (shown in their decreased mean ranks) between pre and post assessments for both treatment 3 and treatment 6. An improvement in items was also reported for all items between assessments pre 3 and pre 6. Of note, is the constant improvement for the items Anxiety/calm and Peaceful/relaxed, as seen in the decrease in mean ranks at each of the five assessments. Table 11 below presents the results of the Friedman tests.

**Table 11. Mean ranks for QOL scores across the five assessments**

N=122	Chi-square	Pre treatment 1	Pre treatment 3	Post treatment 3	Pre treatment 6	Post treatment 6
Empowered*	48.553	3.32	3.42	2.87	3.05	2.34
Depressed*	57.551	3.35	3.45	2.70	3.08	2.42
Anxiety / Calm*	141.529	3.72	3.62	2.32	3.24	2.10
Frustrated*	106.365	3.48	3.50	2.50	3.36	2.16
Confused*	67.168	3.35	3.41	2.77	3.08	2.39
Coping*	75.861	3.45	3.56	2.66	3.01	2.32
Peaceful / Relaxed*	163.567	3.84	3.59	2.26	3.34	1.98

Note: \* denotes significance

To assess the difference in scores from one pre test assessment to the next, a Wilcoxon Signed Ranked Test was performed on data from completed assessment forms for pre 1 and pre 3 (N=419), and then for pre 1 and pre 6 (N=156).



Significant differences were found in the pre 1 and pre 3 comparison for response to questions about Anxiety ( $Z = -2.804$ ;  $p < 0.005$ ) and sense of Peace ( $Z = -3.819$ ;  $p < .0005$ ), whilst significant differences ( $p < 0.05$ ) were found in the pre 1 and pre 6 comparison for items concerning Empowerment ( $Z = -3.047$ ;  $p < 0.005$ ), Depression ( $Z = -1.980$ ;  $p < 0.05$ ), Anxiety ( $Z = -3.519$ ;  $p < 0.0005$ ), Confusion ( $Z = -2.543$ ;  $p < 0.05$ ), Coping ( $Z = -2.734$ ;  $p < 0.05$ ), and feelings of Peace ( $Z = -3.691$ ;  $p < 0.0005$ ). The only item that did not demonstrated significant improvements was the item referring to the patient’s sense of frustration.

## Reliability

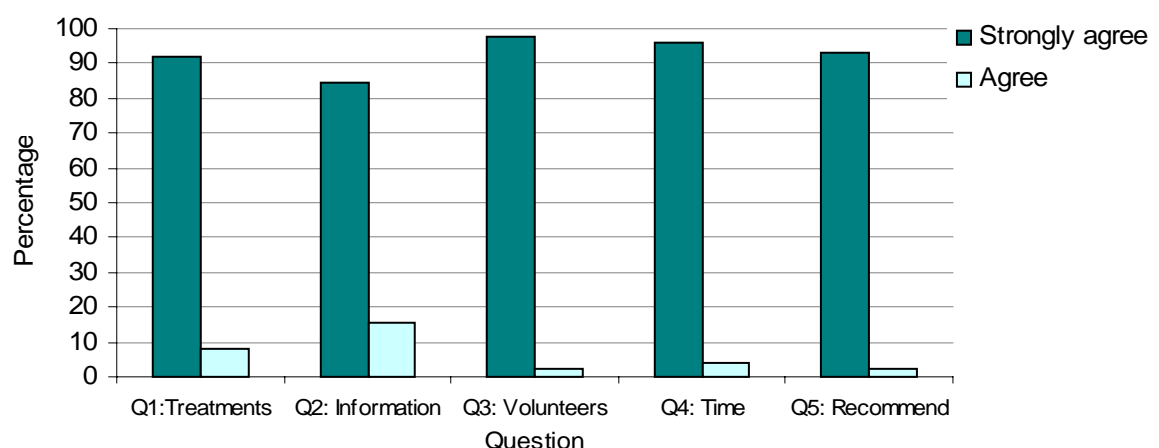
The Cronbach’s alpha coefficients for the Symptom Distress Scale and the Quality of Life Scale for each of the five assessment times are presented in Table 12 below. The value for the Symptom distress scale ranged from 0.68 to 0.81, whilst the values ranged from 0.90 to 0.94 for the Quality of Life Scale. All but one of the coefficients were greater than the pre-set criterion of  $>0.70$  (Nunnally & Bernstein, 1994), and therefore the SAS and QOL scales could be considered reliable.

**Table 12. Cronbach’s alpha coefficient estimates for SDS and QOL at five time points**

Physical Symptoms	Pre treatment 1	Pre treatment 3	Post treatment 3	Pre treatment 6	Post treatment 6
Symptom distress scale	0.73 (N=559)	0.79 (N=419)	0.68 (N=378)	0.81 (N=156)	0.68 (N=130)
Quality of life scale	0.93 (N=559)	0.94 (N=419)	0.92 (N=378)	0.93 (N=156)	0.90 (N=130)

## Satisfaction

Ninety-eight (17%) participants completed the general feedback form. Their responses to questions one to five were very positive, with answers being either “Strongly agree” or “Agree”, as seen in Figure 10 below.



**Figure 8: Degree of agreement to questions 1 to 5.**

## Additional questions

In addition to the five questions about satisfaction, data was obtained on a further two questions, with the following results:

- Twenty-five (27%) of the 93 participants that answered this question indicated they had been referred to another service by the Centre.
- Ninety-one participants answered this question. Sixty-one (67%) of these participants stated they would be interested in attending a workshop on complementary therapies.

### **Comments and suggestions**

Fifty-eight (10%) participants provided feedback, commenting very positively on the service and support (a complete list of comments is presented in Appendix B).

## PARTICIPANTS WITH CANCER

Four hundred and twenty of the 564 (74%) participants reported they had cancer or were having treatment for cancer.

### Demographics

The gender (N = 420) and age (N = 386) statistics were obtained and they were nearly identical to those obtained for the overall population of 564 participants. The majority (87%, N = 364) of participants were female. The age of the 386 (92%) participants ranged from 17 to 85 years of age, with a mean age of 55 years ( $M = 55.47$ ,  $SD = 11.92$ ).

### Overall and individual symptom distress

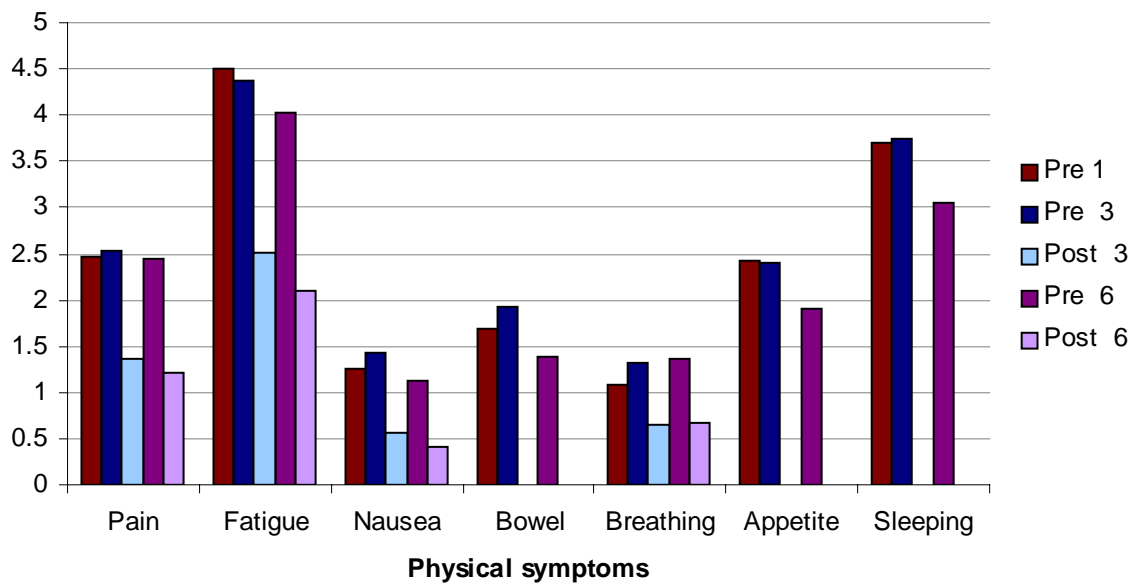
The mean scores for participants' overall symptom distress are presented in Table 13 below and the mean scores for each individual symptom are presented in Table 14.

**Table 13. Mean and standard deviation scores for the overall Symptom Distress Scores for each of the five assessments for participants with cancer**

Treatment visit	Mean	Standard deviation
Pre treatment 1 (N = 416)	17.13	11.36
Pre treatment 3 (N = 325)	17.72	12.16
Post treatment 3 (N = 293)	5.09	5.29
Pre treatment 6 (N = 133)	15.29	11.70
Post treatment 6 (N = 113)	4.42	4.70

**Table 14. Means and standard deviations of physical symptoms at each assessment for participants with cancer**

Physical Symptoms	Pre treatment 1 (N = 416)		Pre treatment 3 (N = 325)		Post treatment 3 (N = 293)		Pre treatment 6 (N = 133)		Post treatment 6 (N = 113)	
	M	SD	M	SD	M	SD	M	SD	M	SD
Pain	2.46	2.82	2.53	2.64	1.36	2.02	2.44	2.55	1.22	1.70
Fatigue/tiredness	4.50	2.74	4.38	2.57	2.52	2.34	4.02	2.61	2.11	2.25
Nausea	1.26	2.27	1.42	2.49	.56	1.38	1.13	1.99	.42	1.02
Bowel	1.69	2.54	1.93	2.72	NA	NA	1.38	2.15	NA	NA
Breathing	1.09	2.08	1.31	2.12	.66	1.43	1.36	2.30	.67	1.43
Appetite	2.43	2.92	2.41	2.98	NA	NA	1.90	2.48	NA	NA
Sleeping	3.71	3.05	3.75	2.97	NA	NA	3.05	2.71	NA	NA



**Figure 9: Physical symptom means for each assessment for participants with cancer**

A Friedman test was performed on the symptom distress scores obtained from the 108 participants who completed all five assessments (items Bowel, Appetite and Sleeping have only pre test results).

Results show significant differences between participants' symptom distress for Pain, Fatigue/tiredness, Nausea and Breathing across the five assessments ( $p < 0.0005$ ). Responses to questions about Sleeping, Bowel and Appetite showed no significant change across the three assessments.

Comparing the ranks for the five sets of symptom distress scores, the pattern follows that obtained for the larger overall sample. Three items (Fatigue, Appetite and Sleeping) showed a slight decrease in symptom distress between pre treatment 1 and pre treatment 3. There was a decrease for all seven symptoms between pre treatment 3 and post treatment 3, and between pre treatment 6 and post treatment 6, see Table 15 below.

**Table 15. Mean ranks for the symptom distress scores for participants with cancer**

N=108	Pre treatment 1	Pre treatment 3	Post treatment 3	Pre treatment 6	Post treatment 6
Pain *	3.10	3.50	2.45	3.49	2.45
Fatigue/tiredness*	3.70	3.68	2.23	3.42	1.97
Nausea*	3.21	3.31	2.70	3.17	2.61
Bowel	1.90	2.13	N/A	1.97	N/A
Breathing*	3.05	3.47	2.68	3.17	2.63
Appetite	2.04	2.01	N/A	1.94	N/A
Sleeping	2.11	2.03	N/A	1.86	N/A

Note: \* denotes significant

▪ **Overall and individual quality of life**

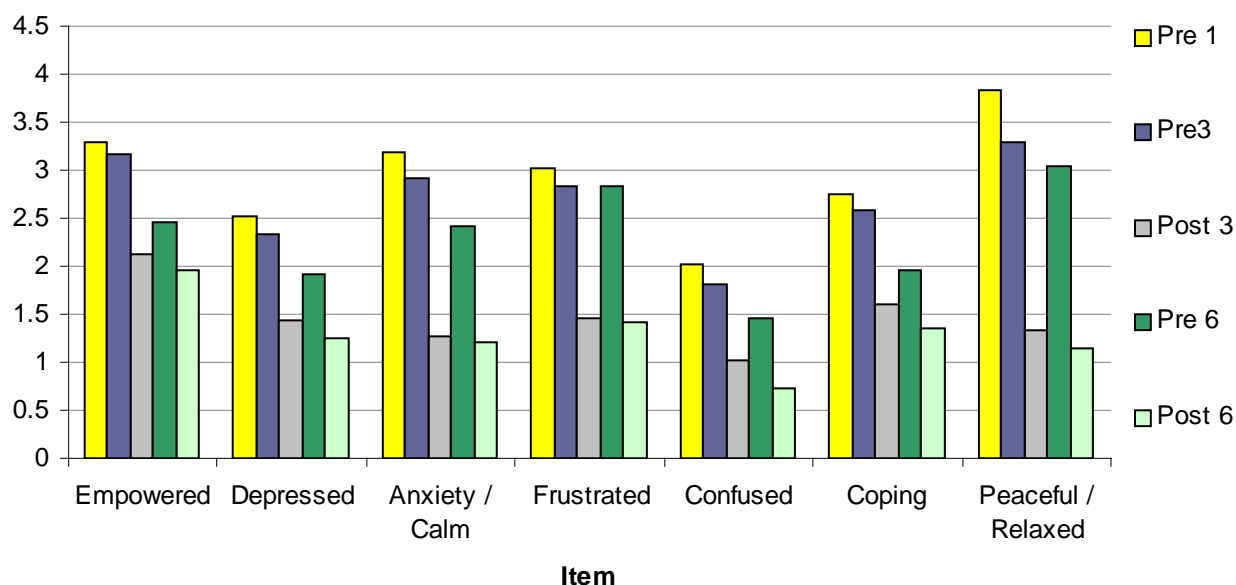
The mean scores for participants' overall quality of life are presented in Table 16 below and the mean scores for each individual symptom are presented in both Table 17 and Figure 10.

**Table 16. Mean scores for the overall quality of life score for each of the five assessments for participants with cancer**

Treatment visit	Mean	Standard deviation
Pre treatment 1 (N = 416)	20.66	16.80
Pre treatment 3 (N = 325)	18.94	15.99
Post treatment 3 (N = 293)	10.28	11.53
Pre treatment 6 (N = 133)	16.07	14.84
Post treatment 6 (N = 113)	9.07	10.71

**Table 17. Means and standard deviations of quality of life scores for each of the five assessments for participants with cancer**

Physical Symptoms	Pre treatment 1 (N = 416)		Pre treatment 3 (N = 325)		Post treatment 3 (N = 293)		Pre treatment 6 (N = 133)		Post treatment 6 (N = 113)	
	M	SD	M	SD	M	SD	M	SD	M	SD
Empowered	3.29	3.04	3.17	2.77	2.13	2.21	2.46	2.44	1.95	2.17
Depressed	2.53	2.74	2.34	2.59	1.44	2.00	1.91	2.33	1.25	1.84
Anxiety / Calm	3.19	2.84	2.91	2.68	1.27	1.81	2.41	2.48	1.21	1.92
Frustrated	3.03	3.03	2.83	2.94	1.46	2.10	2.83	3.01	1.42	2.31
Confused	2.03	2.76	1.81	2.54	1.03	1.77	1.46	2.29	.73	1.42
Coping	2.75	2.79	2.59	2.63	1.60	2.02	1.95	2.39	1.35	1.86
Peaceful / Relaxed	3.84	2.93	3.29	2.70	1.34	1.89	3.05	2.64	1.15	1.74



**Figure 10: Quality of life mean for each assessment for participants with cancer**

A Friedman test was performed on the QOL scores obtained from the 108 participants with cancer who completed all five assessments. This test shows significant differences between participants' QOL scores for all seven items across the five assessments ( $p < 0.005$ ).

Comparing the ranks for the five sets of scores, scores for items referring to Anxiety/calm and Peaceful/relaxed decreased from Pre 1 to Pre 3, the score for the item asking about Frustration remained unchanged, and the other five items' scores increased. The scores for all seven items decreased between pre and post assessments for both treatments 3 and 6. Additionally, all items' scores decreased from Pre 3 to Pre 6. See Table 18 below.

**Table 18. Mean ranks for the quality of life scores for participants with cancer**

N=108	Pre treatment 1	Pre treatment 3	Post treatment 3	Pre treatment 6	Post treatment 6
Empowered	3.30	3.46	2.85	3.01	2.38
Depressed	3.36	3.42	2.70	3.06	2.46
Anxiety / Calm	3.65	3.59	2.34	3.25	2.17
Frustrated	3.45	3.45	2.53	3.35	2.22
Confused	3.33	3.37	2.81	3.06	2.43
Coping	3.45	3.49	2.68	2.96	2.42
Peaceful / Relaxed	3.81	3.58	2.28	3.31	2.02

*Note:* all items were significant

## Comparing therapies for pain and fatigue

A Mann-Whitney U Test was run to assess the impact on both the pain and fatigue scores for people receiving Reiki treatment as compared with people receiving aromatherapy treatment. No significant differences were found in the difference scores (for pre and post treatment 3, and pre and post treatment 6).

## Reliability and validity

The Cronbach's alpha coefficients for the symptom distress scale and the quality of life scale for each of the five assessment times are presented in Table 19 below. The value for the Symptom distress scale ranged from 0.68 to 0.81, whilst the values ranged from 0.90 to 0.94 for the Quality of Life scale. All but one of the coefficients were greater than the pre-set criterion of >0.70 (Nunnally & Bernstein, 1994), and therefore the SAS and QOL scales could be considered reliable.

The correlations between the mean quality of life score with the response to each item on the symptom distress scale were found to be small to moderate (ranging from 0.163 to 0.588). These results confirm the concurrent validity of the symptom distress scale and demonstrate that the constructs of the symptom distress scale and quality of life scale are related but distinct.

An analysis of the inter-item correlations indicated significant correlations between 0.089 to 0.546 (for the symptom distress scale) and 0.438 to 0.804 (for the quality of life scale). The pre-set criterion for acceptable inter-item correlations is that 50% of inter-item correlations should fall between 0.30 and 0.70 (Nunnally & Bernstein, 1994). This preset criterion was achieved, and all items, including those with lower inter-item correlations were clinically interpretable, for example nausea and breathing.

**Table 19. Cronbach's alpha coefficient estimates for SDS and QOL at five time points for participants with cancer**

Physical Symptoms	Pre treatment 1	Pre treatment 3	Post treatment 3	Pre treatment 6	Post treatment 6
Symptom distress scale	0.72 (N=416)	0.78 (N=325)	0.69 (N=293)	0.82 (N=133)	0.67 (N=113)
Quality of life scale	0.93 (N=416)	0.93 (N=325)	0.93 (N=293)	0.93 (N=133)	0.90 (N=113)

## DISCUSSION

### Profile

The SCGH Brownes Cancer Support service is primarily used by women (85%) and almost half (47%) have breast cancer. Most (69%) patients are receiving on-going treatment at SCGH, and the majority (61%) of participants are outpatients.

## **Treatment**

An improvement in overall symptom distress and individual symptom distress is evident for all symptoms (with the exception of Appetite and Bowel symptoms) across the three treatment times. Improvement in scores from treatment one to the sixth treatment were noted for symptoms, Fatigue, Appetite, and Sleeping. The positive effect on appetite was only observed from pre treatment 1 to post treatment 6, suggesting that this symptom may not be as amenable to change over a shorter treatment time period.

Improvements in fatigue are difficult to achieve and previous studies have indicated that this symptom is one of the most difficult to treat. Therefore, potential benefits in fatigue management with the treatment given are encouraging.

## **Quality of life**

Significant improvements in overall and individual quality of life scores were observed over assessments pre 1 to post 6. The impact of the therapies on participant's quality of life seems particularly beneficial because all items except the item relating to one's sense of frustration, produced a significant difference between the assessment at treatment one to that at treatment 6. The quality of life benefits associated with these treatments may be potentially helpful in allowing patients to cope with their illness.

The results of the symptom distress for participants with cancer were very similar to those of the overall participant sample. That is, participants showed significant positive differences (ie, improvements) across the assessments for Pain, Fatigue/tiredness, Nausea and Breathing, but not for Sleeping, Appetite or Bowel. The results of the quality of life items mirrored those of the overall sample, in that participants showed significant differences across the assessments for all items.

The instrument demonstrated an acceptable internal consistency reliability estimate.

## **CONCLUSION**

Patients participating/receiving care through the SCGH Brownes Cancer Support Centre report improvements in both quality of life and symptom distress scores. These improvements are marked between the pre and post scores for each treatment visit, and there is also improvement over the course of the sessions, from treatment 1 to treatment 6.



## **APPENDIX A: INTERESTS**

- 01 All alternative health modalities including yoga.
- 02 All sport, swimming no!
- 03 Almost everything
- 04 Alternative and complementary therapies, reading and craft.
- 05 Animals
- 06 Animals
- 07 Animals, movies & family
- 08 Anything
- 09 Aromatherapy
- 10 Art
- 11 Art
- 12 Art & sewing
- 13 Art, animals, psychology
- 14 Art, aromatherapy & swimming
- 15 Art, Teaching, Life in General
- 16 Arts & crafts
- 17 Ballroom dancing.
- 18 Beach, friends, family, reading
- 19 Botany, photography, gardening and home crafts.
- 20 Bowls and cooking
- 21 Breeding Schnauzers
- 22 Bridge & art
- 23 Bridge, reading, sewing & community work.
- 24 Bush & permaculture
- 25 Bush regeneration, the eco system.
- 26 Cake decorating
- 27 Cake decorating
- 28 Camping & fishing
- 29 Ceramics
- 30 China painting & movies
- 31 Cinema, stamps, family & travel
- 32 Classic cars & soccer
- 33 Classical music & walking
- 34 Community service & genealogy
- 35 Computer games & crosswords
- 36 Computer, sewing & reading
- 37 Cooking & walking
- 38 Cooking, craft, grandkids, home décor.
- 39 Cooking, dancing, yoga, meditation, music, health and fitness benefits.
- 40 Cooking, sewing, sport, arts & crafts

- 41 Counselling & Reiki
- 42 Craft, press dry flowers, embroidery
- 43 Craft, teaching & parenting
- 44 Crafts, painting & gardening
- 45 Crafts, reading & gardening
- 46 Crosswords
- 47 Cycling, scuba, snorkelling
- 48 Dancing
- 49 Dancing and Tennis
- 50 Dancing, enjoying my boys
- 51 Dressmaking
- 52 Equestrian activities
- 53 Everything
- 54 Everything - fishing and walking
- 55 Exercise & walking
- 56 Exercise, meditation and music
- 57 Family
- 58 Family & gardening
- 59 Family and Art
- 60 Family history
- 61 Family, Exercise & travel
- 62 Family, reading & church group
- 63 Farming
- 64 Farming, gardening & reading
- 65 Fishing
- 66 Fishing & boating
- 67 Fishing & gardening
- 68 Fishing & holidays
- 69 Fishing, lawn bowls & cars
- 70 Fitness
- 71 Gardener, sewing, movies, dinners & casino
- 72 Gardening
- 73 Gardening
- 74 Gardening & crafts
- 75 Gardening & gardens
- 76 Gardening & reading
- 77 Gardening and woodwork
- 78 Gardening reading & herbs
- 79 Gardening, driving ponies
- 80 Gardening, football, music craft & dancing
- 81 Gardening, going to the beach/for coffee/with friends.
- 82 Gardening, patchwork & geneology

- 83 Gardening, quilting & reading
- 84 Gardening, reading
- 85 Gardening, reading
- 86 Gardening, reading & art.
- 87 Gardening, reading & computers
- 88 Gardening, reading and movies
- 89 Gardening, sewing, reading & walking
- 90 Gardening, swimming & reading
- 91 Getting better- family, friends, reading
- 92 Getting well
- 93 Getting Well
- 94 Golf & Bowls
- 95 Golf & swimming
- 96 Golf & theatre
- 97 Golf & walking
- 98 Golf, bridge, craft & languages
- 99 Golf, bridge, walking, music, theatre food, wine & caravanning
- 100 Golf, bushwalking & fishing
- 101 Golf, fishing, boating
- 102 Golf, riding & volunteering for the disabled
- 103 Handcraft & cards
- 104 Health & fitness
- 105 Home, family & cross-stitch
- 106 Hunting, football, Railway, model rail, shooting clay targets
- 107 Interior painting, reading, the garden & software
- 108 Keeping healthy
- 109 Kids/Family
- 110 Knitting, Family
- 111 Knitting, gardening & walking
- 112 Language study, swimming and walking.
- 113 Living
- 114 Lots
- 115 Macadamias
- 116 Making Faberge' eggs
- 117 Many
- 118 Master's of Public Health ECU
- 119 Meditation
- 120 Meditation & relaxation
- 121 Meditation and reading
- 122 Meditation, tai chi, reading
- 123 Meditation, walking & music
- 124 Motorcycles

- 125 Movies, walking, travelling, diving
- 126 Mum & computer graphics
- 127 Museum studies & bushwalking
- 128 Music & drag racing
- 129 Music & dressmaking
- 130 Music & theatre
- 131 Music, being with friends and riding motorbikes
- 132 Music, natural healing medicine
- 133 Music, psych/philosophy
- 134 Music, reading and meditation
- 135 Music, Theatre, Sports & sewing
- 136 Music, Yoga, Family and friends
- 137 My new dog
- 138 Netball, crafts & gardening
- 139 New age
- 140 Nursing & church
- 141 Patchwork
- 142 Patchwork and reading
- 143 Patchwork, reading and gardening.
- 144 People, amateur drama, therapeutic arts and crafts
- 145 Permaculture & animals
- 146 Personal growth
- 147 Photography, walking, swimming & reading.
- 148 Pilates & reading
- 149 Pottery
- 150 Reading
- 151 Reading
- 152 Reading
- 153 Reading
- 154 Reading
- 155 Reading & gardening
- 156 Reading & gardening
- 157 Reading & people
- 158 Reading & travel
- 159 Reading & travel
- 160 Reading & yoga
- 161 Reading and art
- 162 Reading and family
- 163 Reading and work
- 164 Reading relaxation and animals.
- 165 Reading, art & gardening
- 166 Reading, biking, cooking & music

- 167 Reading, cooking, gardening and caring for my friends
- 168 Reading, craft & walking
- 169 Reading, dancing & musical theatre
- 170 Reading, Fishing
- 171 Reading, gardening & art
- 172 Reading, knitting, movies & friends
- 173 Reading, music & craft
- 174 Reading, pets, quilting, cooking & walking
- 175 Reading, piano, walking & family
- 176 Reading, puzzles & crafts
- 177 Reading, swimming & tennis
- 178 Reading, walking and bridge.
- 179 Reading, walking, gardening, football
- 180 Reading, walking, golf, history.
- 181 Reading, writing, people, gardening, printing & movies
- 182 Recently retired to a new property
- 183 Reiki, Healing and music
- 184 Running & craft
- 185 Sailing & Rugby
- 186 Scuba, reading, painting & animals
- 187 Sculpture
- 188 Sewing & walking
- 189 Sewing, reading & socialising
- 190 sewing, spinning, music & homemaking
- 191 Snow-skiing, tennis & walking
- 192 Spirituality
- 193 Sport
- 194 Sport
- 195 Sport
- 196 Sport
- 197 Sport & fishing
- 198 Sport, TV shows & reading.
- 199 Sports
- 200 Sports & computers
- 201 sports cars & girls
- 202 Sports, gym & reading
- 203 Sports, woodwork & bush walking
- 204 Surfing & Kiteboarding
- 205 Swimming & French
- 206 Swimming & walking
- 207 Swimming walking
- 208 Swimming, gardening

- 209 Swimming, music, gardening
- 210 Tai Chi & patchwork quilting
- 211 tango dancing and painting
- 212 Tennis
- 213 Tennis, golf & business/office
- 214 Tennis, netball, bushwalking & wild flowers
- 215 Theatre, classical music and reading
- 216 Touch footy, softball, swimming, watching BMX and moto x
- 217 Travel
- 218 Travel, fitness, reading & studying
- 219 Travelling
- 220 Travelling
- 221 Walking & gym
- 222 Walking & reading
- 223 Walking, bike riding & reading
- 224 Walking, caring, reading.
- 225 Walking, gardening and family
- 226 Walking, painting, singing, gardening
- 227 Walking, reading, University of the 3rd Age, TV & movies.
- 228 Walking, sewing & reading
- 229 Walking, yoga & cross-stitch
- 230 Wheelchair sports
- 231 Wildlife, photography & music
- 232 Wine making
- 233 Wine, food, friendships
- 234 Woodwork
- 235 Work, family, movies, gym & friends
- 236 Work, relaxation, caring & golf
- 237 Writing
- 238 Yoga, art and reading

## APPENDIX B: COMMENTS

- 01 A beautiful centre - very relaxing, centering and uplifting. Thank you very much. Great to see such positive things happening within the community.
- 02 A fantastic service. Since diagnosis of breast cancer I have felt unsure about life and what might happen. Pranic healing has been wonderful.
- 03 A very relaxing treatment.
- 04 A wonderful caring organization.
- 05 A wonderful group of friendly workers and staff.
- 06 Being able to access different types of therapy at no cost has been wonderful. I commend those who provide these services as well as those who pushed for the overall centre to be developed. It provides a much needed treatment centre for those with cancer.
- 07 Bowen therapy has helped me tremendously.
- 08 Can't get enough! Thank you for the treats
- 09 Carry on the great work, you're doing a great job.
- 10 Definitely makes you feel better, more relaxed and at peace. It helps you get through your treatment.
- 11 Everyone does such a great job. Nice to come in and escape from things for a while.
- 12 Excellent initiative.
- 13 Expand the service! It is very beneficial.
- 14 Finding the centre services extremely helpful in dealing with emotional stress and curative hope.
- 15 Found the centre caring. A quiet sanctuary before or after treatment. A great service.
- 16 Good range of treatments available. Thank you.
- 17 Heard about centre through nurse at radiotherapy.
- 18 How can I ever thank you for the wonderful support you have given me over these past few weeks. Keep up the good work you have been my special angels in a void in my life. God bless you all.
- 19 I am an RPH patient & had to ask for the info on the Browne's centre. Maybe more pamphlets in the breast clinic/chemo treatment rooms at RPH.
- 20 I am finding the Reiki works wonders. The other therapies (aromatherapy & reflexology) relax me on the day - a great feeling of well being.
- 21 I found chemo was a difficult day for me so I came to your support centre on the morning of chemo treatment. This relaxed me for the rest of the day and made the treatment easier.
- 22 I found I was looking forward to and really need what was on offer and would have used the facility more had I been able to. Only comment is about the noise while having treatment which breaks into your peace.
- 23 I have found that parking and finding my way to the centre the only problems. Congratulations on a great job.
- 24 I love this place! All the volunteers are wonderful.
- 25 I really appreciate being able to have these treatments as at the moment I wouldn't be able to afford to pay for them. It's been good to try different therapies & I've found all of them relaxing. I look forward to my appointments. I'm keen to help myself & my body recover and these sessions definitely help me. Thank you.

- 26 I strongly feel that having this centre at the hospital has enabled me to come to terms with the hospital environment and the treatment I am receiving. Being able to come and sit in such a positive and loving atmosphere has really enabled me to cope with the medical treatment I am undergoing.
- 27 I thank everyone and would recommend this centre to anyone going treatment for cancer.
- 28 I think it is an excellent centre and extremely helpful for patients especially those who are very ill and upset, with few friends or relatives to turn to.
- 29 I think it's a very valuable centre when you're having treatment.
- 30 I think people like myself suffering from cancer need all the support they can get, and think the support centre does a great job in contributing to this support.
- 31 I wish I'd heard of the centre whilst in hospital - it is such a refuge!
- 32 I would not have survived personal stress (immense) as well as cancer, without the help from this haven.
- 33 It has been an absolute pleasure coming in here for support & treatment. It helps me feel calm and empowered. The staff are marvellous & I truly believe it is having a positive effect on the outcome of my treatment. I also see other patients here so it reminds me that I'm not the only one dealing with these issues. I have felt far less anxious & worried since I have been coming here. Thank you so much!
- 34 It would be good if these types of therapies were available at all hospitals.
- 35 It's always very comfortable at the centre. Everyone is extremely supportive. Thank you X and all at the centre. You provide valuable encouragement in my recovery and transformation. X is a real angel - bless her.
- 36 Keep doing the great job you're doing here. "Politicians" should help make this service available to other family members too.
- 37 Keep up the good work.
- 38 Lovely caring staff. I love coming here, the massage helps my tension immensely as my neck & shoulders get very tight when life is pressured as it has been lately.
- 39 Lovely people and sessions are most helpful.
- 40 Over the six weeks of my treatment I have felt a marked improvement in my wellbeing. I feel more calm within myself and more in control of my life.
- 41 Seen on Access 31 TV channel.
- 42 Sessions based on the philosophy of Louise Hays; align therapies at the centre with treatment if possible - but I am very grateful of the support here. Thanks. I have the highest regard for my therapists here and the wonderful volunteers. God bless.
- 43 Should be down in Fremantle hospital.
- 44 Thank you for all your kindness and support. Keep up the good work.
- 45 Thank you for the help I have received. I was a real wreck. I thank Browne's Dairy Support Centre for this wonderful service and also Allison for the help that I have received.
- 46 Thank you Sharon for making me feel so relaxed.
- 47 Thank you very much. Heard about centre through Radiology clinic SCGH.
- 48 Thanks for all your help. X has been a great support. Thanks also to all your friendly staff.
- 49 Thanks so much. Keep up the wonderful sharing of your gifts, talents and caring.
- 50 The centre and staff are doing a great job! I have been helped immeasurably both mentally and emotionally.



- 51 The centre offers wonderful service. Thank you.
- 52 The support centre has been a great resource of care for me during the initial shock & acceptance of my role as carer for my husband who has an inoperable aggressive cancer. At all times staff & volunteers have given me quite positive feedback & really convey quality care and concern when they say "how are you today?" Thank you.
- 53 There should be a centre like this in every public and private hospital. Thankyou Sir Charles Gairdner for having this one.
- 54 Very good work. Keep it up. I am sure complimentary therapies will help to control the patients with problems.
- 55 Very relaxing body & soul.
- 56 What a terrific service! I have found it extremely educational as my knowledge of complementary medicine is very poor. I have here the opportunity to explore and enjoy new ideas - a great experience.
- 57 What a wonderful support centre to discover, to make people feel so happy.
- 58 Would like the service to be ongoing while attending hospital.