



Sydney Cancer Centre



Self Reported Cognitive Symptoms in Cancer Patients attending Out-Patient Medical Oncology Clinics

Victoria Bray¹, Haryana Dhillon², Janette Vardy^{1,2,3}

Sydney Cancer Centre, Concord Repatriation General Hospital¹; Centre for Medical Psychology and Evidence-based Decision-making, The University of Sydney²; Faculty of Medicine, The University of Sydney³



Background

- Cognitive changes are increasingly recognised in cancer patients
- Up to 70% of breast cancer survivors reported cognitive changes both during and following chemotherapy
- Self reported cognitive impairment is associated with increased anxiety, depression, and fatigue and poorer quality of life
- Poor correlation between patients' self report of cognitive function and objective cognitive function on neuropsychological testing



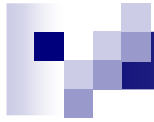
Aim

- To determine the prevalence of self reported cognitive symptoms in a general cancer population



Methods

- Evaluation of self reported cognitive symptoms in cancer patients attending out-patient medical oncology clinics at a tertiary Sydney hospital during one calendar month
- European Organisation for Research and Treatment of Cancer – Quality of Life Cognitive Functioning Scale (EORTC CF)
- Explore associations between cognitive symptoms and :
 - patient characteristics;
 - tumour characteristics;
 - treatment characteristics

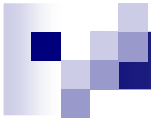


Methods: EORTC CF

Directions: For each item below, please check the ONE box

During the past week:

	Not at all	A little	Quite a bit	Very much
Have you had difficulty in concentrating on things, like reading a newspaper or watching television?				
Have you had difficulty remembering things?				



Methods

**Patient
characteristics**

**Tumour
characteristics**

**Treatment
characteristics**



Methods

**Patient
characteristics**

Tumour
characteristics

Treatment
characteristics

Gender

Age



Methods

Patient
characteristics

**Tumour
characteristics**

Treatment
characteristics

Date of initial cancer diagnosis

Tumour site

Goal of treatment



Methods

Patient
characteristics

Tumour
characteristics

**Treatment
characteristics**

Chemotherapy and targeted therapies

- Current: regime and number of cycles
- Previous: regime and number of cycles

Hormone therapy

- Current: type and duration of treatment
- Previous: type and duration of treatment

Cranial Irradiation

- Brain metastases vs. Prophylactic Cranial Irradiation

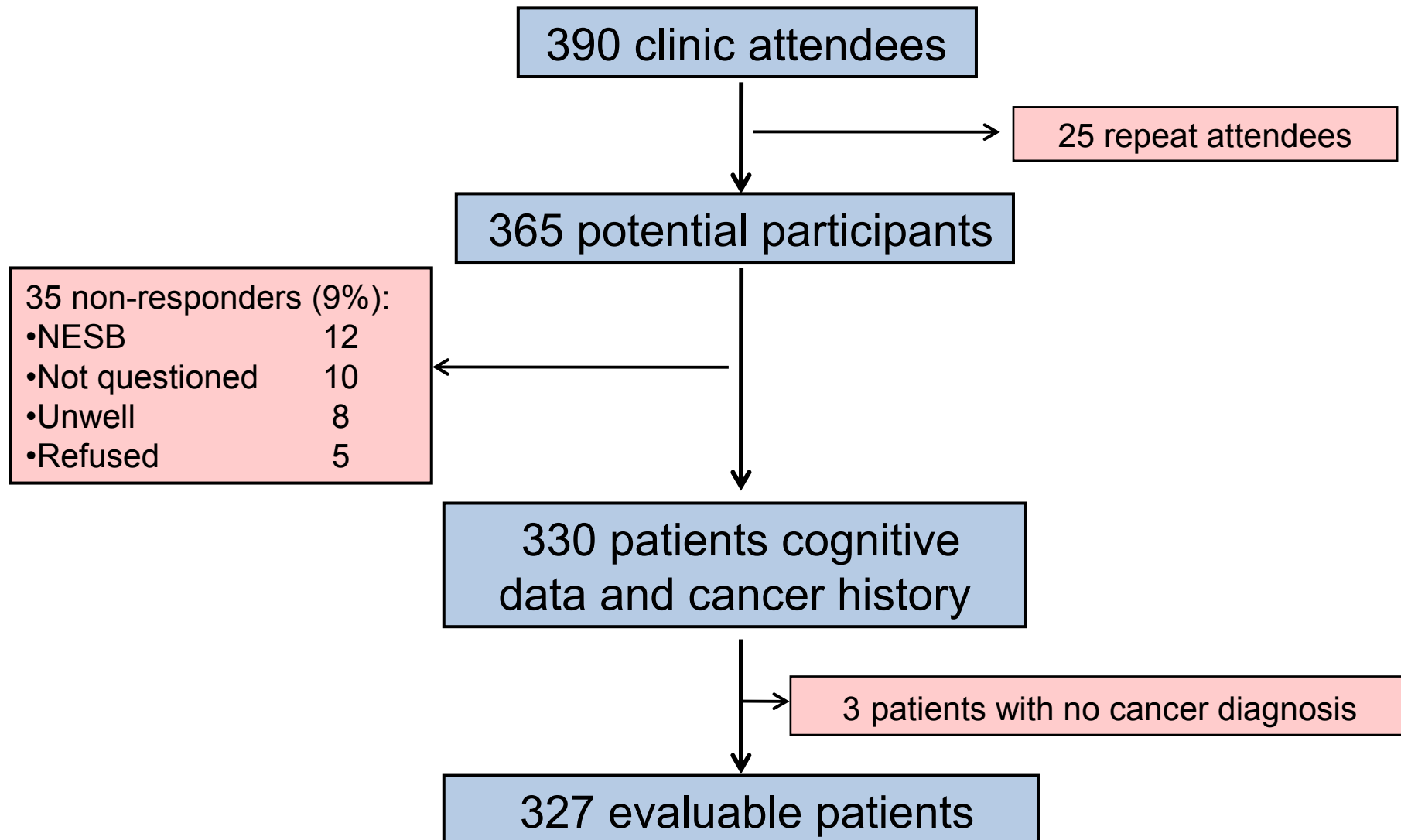


Methods: Statistical analysis

- Association between cognitive symptoms and the following variables using chi square tests of trend
 - Gender
 - Tumour type
 - Goal of treatment
 - Systemic cancer treatment
 - Lines of treatment

- Associations between cognitive symptoms and the following variables using Spearman's correlation
 - Age
 - Time from initial cancer diagnosis

Consort diagram of patient participation





Results: Patient and disease characteristics

- Median age: 63 years (range 21 - 90)
- Gender: 54% female
- Median time from diagnosis: 14 months (range 0 - 243 mths)
- Goal of treatment
 - Curative: 38%
 - Palliative: 62%



Results: Tumour type

Primary Tumour Type	Number of Individuals
Breast	26% (85)
Colorectal	26% (86)
Thoracic	15% (48)
Genitourinary	13% (41)
Others	11% (35)
Upper Gastrointestinal	7% (24)
Ovarian	2% (8)



Results: Treatment characteristics

Type of treatment	Any treatment		Current treatment	
	Yes	No	Yes	No
Chemotherapy and/or targeted therapies (n=327)	79% (257)	21% (70)	46% (149)	54% (178)
Hormone therapy (breast cancer, n=85)	60% (51)	40% (34)	36% (31)	64% (54)

Results: Treatment characteristics

Type of treatment	Any treatment		Current treatment	
	Yes	No	Yes	No
Chemotherapy and/or targeted therapies (n=327)	79% (257)	21% (70)	46% (149)	54% (178)
Hormone therapy (breast cancer, n=85)	60% (51)	40% (34)	36% (31)	64% (54)

Lines of therapy	1	2	3	4 or more
Number of patients	71% (182)	22% (56)	5% (13)	2% (6)



Results: Treatment characteristics

Cranial Irradiation (n=9)

- Brain metastases 6
- Prophylactic cranial irradiation 2
- Primary brain tumour 1



Results: Self-reported cognitive symptoms

	Not at all	A little	Quite a bit	Very much
Have you had difficulty in concentrating on things, like reading a newspaper or watching television?	63% (206)	22% (72)	13% (44)	2% (5)
Have you had difficulty remembering things?	43% (142)	39% (129)	16% (51)	2% (5)



Results: Self-reported cognitive symptoms

Difficulty with memory and/or concentration	Number of individuals (%)
Not at all	38% (125)
A little	37% (120)
Quite a bit	22% (73)
Very much	3% (9)



Associations between memory and patient, disease and treatment characteristics

Characteristics	Significance
Age	P=0.12 (rho=0.15)
Gender	P=0.001
Tumour type	P<0.0001
Goal of treatment	P=0.10
Time from diagnosis	P=0.17 (rho=0.08)
Any systemic cancer treatment	P=0.98
Current systemic cancer treatment	P=0.58
Lines of systemic cancer treatment	P=0.62



Memory and gender

	Difficulty with memory		
	Not at all	A little	Quite a bit very much
Male (n=150)	53% (79)	35% (53)	12% (18)
Female (n=177)	36% (63)	43% (76)	21% (38)



Memory and tumour type

	Difficulty with memory		
	Not at all	A little	Quite a bit; very much
Breast cancer (n=85)	27% (23)	45% (38)	28% (24)
Non breast cancer (n=242)	49% (119)	38% (91)	13% (32)



Associations between concentration and patient, disease and treatment characteristics

Characteristics	Significance
Age	P=0.25 (rho=0.06)
Gender	P=0.10
Tumour type	P=0.14
Goal of treatment	P=0.76
Time from diagnosis	P=0.73 (rho=0.02)
Any systemic cancer treatment	P=0.80
Current systemic cancer treatment	P=0.47
Lines of systemic cancer treatment	P=0.97



Limitations of the study

- Single assessment
- Lack of control group
- No collection of data exploring other aetiologies for cognitive symptoms



Summary

- 25% of cancer patients reported at least “quite a bit” of difficulty with memory and/or concentration
- Increased prevalence of self reported memory difficulties in females and breast cancer patients
- This degree of cognitive symptoms is likely to be clinically meaningful



Acknowledgements

- Oncologists at Concord Hospital

- A/Prof Philip Beale
- Prof Stephen Clarke
- Dr Ray Asghari
- A/Prof Martin Stockler
- Dr Anne Sullivan
- A/Prof Janette Vardy

- Clinic Staff

- EN Karen Bird