

**Breast cancer follow-up care:
past research and future
directions**

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Objectives of the Presentation

- 1. To review the literature on different models of breast cancer follow-up care.**
- 2. To present a program of research to evaluate a model of primary care based breast cancer follow-up.**
- 3. To describe ongoing and new research.**

Managing success

- **Breast Cancer Survivors**
 - ⇒ **Over 80% are long-term survivors**
 - ⇒ **>150,000 breast cancer survivors in Canada**
 - ⇒ **2 million in US**

Survivorship Issues

- **Surveillance for recurrence**
- **Surveillance for late sequelae**
- **Risk of new primary cancer**
- **Psychosocial issues**
- **Special concerns**
- **General medical and preventive care**

Routine Follow-up

- **“Follow-up” refers to the period after completion of primary treatment and before the onset of symptoms, signs or test results indicating recurrence.**
- * **a.k.a. – well follow-up: routine follow-up**
- * **screening strategy**

Goals

- **Primary Goals:**
 - 1. Timely diagnosis of recurrence**
 - 2. Prevention of morbidity**
 - 3. Detection of local recurrence**
 - 4. Detection of new primaries**
 - 5. Provision of psychosocial support**
 - patient
 - provider

Cancer care staff 'burned out'

Study shows doctors, nurses exhausted by soaring workload; consider leaving for other jobs

BY SI

NATIONAL POST, TUESDAY, JULY 25, 2000

Doctors in Ontario's cancer centres are burned out and exhausted, getting out just as Ontario with a serious cancer workers

Burnout overwhelms cancer workers

Ontario study finds they're harder hit than even ER staff

BY BRAD EVENSON

More than a third of Ontario cancer care workers are considering quitting or cutting their work

ments have been developed and screening has become more widespread, particularly in the past five years. As a result, the number of people entering the cancer care system is increasing at about 7% a year.

"People are living longer, and there are more treatments for people when they are in the end stage of their disease," says study co-author Dr. Eva Grunfeld, a

THE GLOBE AND MAIL

Cancer workers burnt-out, study says

Doctors complain of emotional fatigue

Canadian Press, Toronto

Doctors and health-care workers treating cancer patients in Ontario are experiencing worrisome levels of burnout, a study published yesterday in the Canadian Medical Association Journal warns.

Cancer centre staff face burnout

Study prompts fear staff may leave Hamilton

By SUZANNE MORRISON
Medical Research Reporter
The Hamilton Spectator

Hamilton is in danger of losing highly skilled cancer doctors and health care workers who are coping with job burnout and emotional exhaustion.

edly reflect on the quality of care, because cancer patients expect and need that kind of emotional support."

Slightly fewer than half of the doctors said they have seriously considered cutting back on their hours, taking early retirement, moving to another province or getting out of the field entirely. Thirty-seven per cent of nurses and other health professionals said they have thought of leaving for a job outside of cancer care.

Although the study didn't measure it, doctors and nurses told the researchers they know

Surveillance for Recurrence

- **Distant recurrences**
 - ⇒ occur within 5 years
 - ⇒ can occur ≥ 10 years
- **Most frequent sites of recurrence:**
 - ⇒ breast, bone, liver, lungs
- **69% of recurrences are interval events and present with signs or symptoms, not routine tests**

Grunfeld et al, BMJ 1996

Diagnosis of Recurrence

		Interval or symptomatic (%)
▪ Tomlin	1987	64
▪ Zwaveling	1987	73
▪ Rutgers	1989	77 (distant)
▪ Ciatto	1985	58
▪ Ormistan	1985	78
▪ Valagussa	1981	78
▪ Stierer	1989	40 (distant)
▪ Pandya	1985	54
▪ Scanton	1980	73
▪ Winchester	1979	91
▪ Grunfeld	1997	69*
▪ Woster	1995	77*
▪ Donnelly	2002	74*
▪ te Boekhorst	2001	63

* Identified as interval event

Tomiak Ann Oncol 1993

Follow-up Guidelines

- **Mammograms annually**
- **No other routine investigations**
- **Encourage patients to report new persistent problems**
- **Psychosocial support**

Grunfeld et al. Clinical Practice Guidelines for Care and Treatment of Breast Cancer, CMAJ 2005

Role of Family Physician

- **Concern about the ‘separation’ of cancer patients from the Family Physician (FP)**
 - ⇒ **Research:**
 - **60% of patients would contact FP if problems**
 - **63% of patients presented to FP with symptoms**
 - **53% of FPs have been involved**
 - **90% of FPs would accept responsibility for followup**
 - ⇒ **Important ‘informal’ role**

Guideline Statements

ASCO 1998 update

“continuity of care should be encouraged and follow-up should be performed by a physician experienced in breast cancer” [2006 update pending]

Canadian 2005

“responsibility for follow-up should be formally allocated to a single physician, with the patient participating as much as possible”

Bari Consensus Conference 1995

“patients want a ‘team’ of providers to be accessible when necessary for their care”

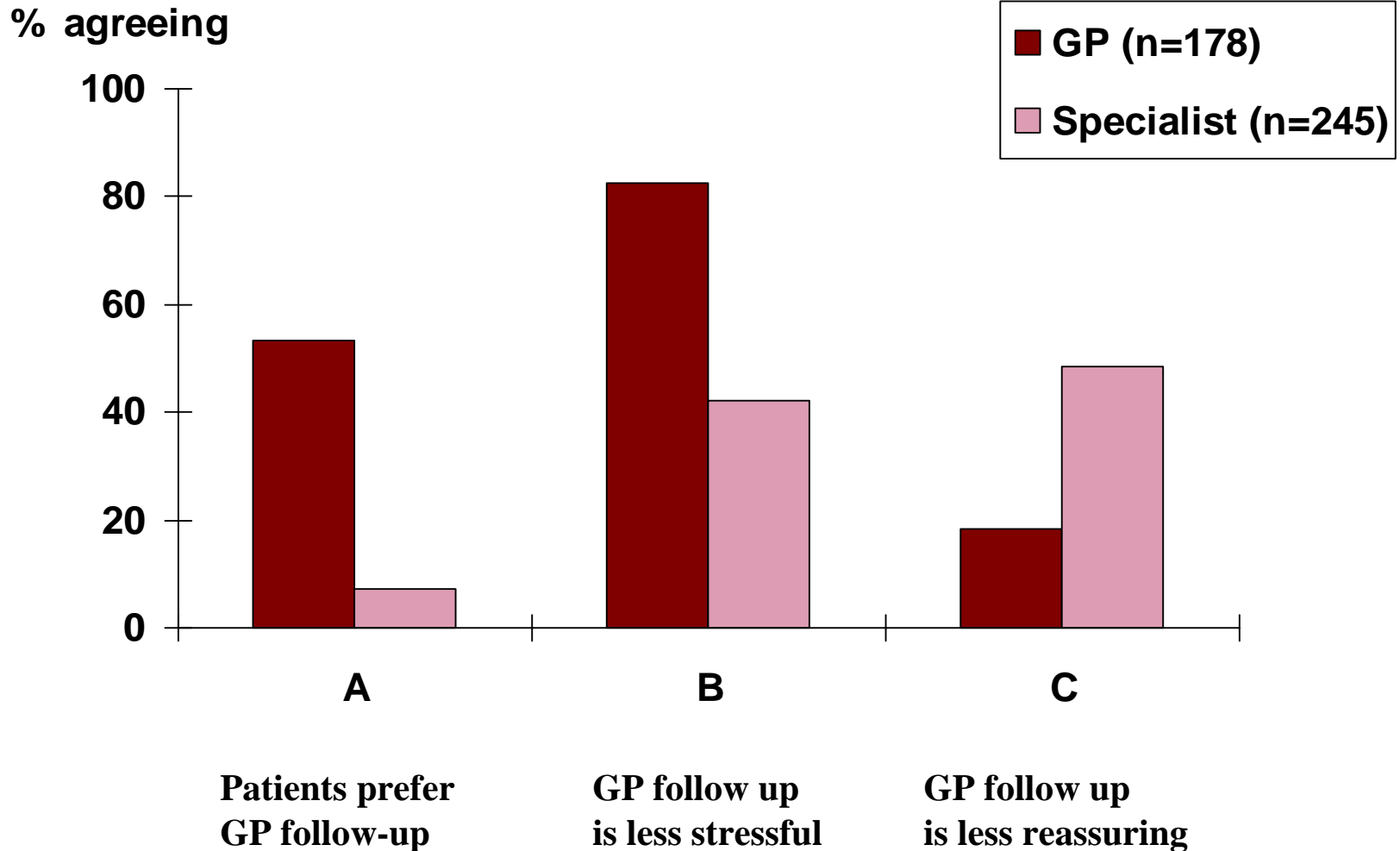
Models of Follow-up Care

<u>Model</u>	<u>Design</u>	<u>Comments</u>
Nurse-based		
James 1994	Observational	pilot; no clinical outcomes
Primary-care based		
Grunfeld 1996	RCT	clinical, QL, satisfaction, costs
Grunfeld 1999	RCT	
Specialist based		
GIVIO 1994	RCT	survival, QL
Del Turco	RCT	survival
Patient initiated		
Gulliford 1997	RCT	pilot; no clinical outcomes
Brown 2001	RCT	QL: satisfaction
No follow-up		
Jacob 2001	Markov model	73d ↑ in life expectancy

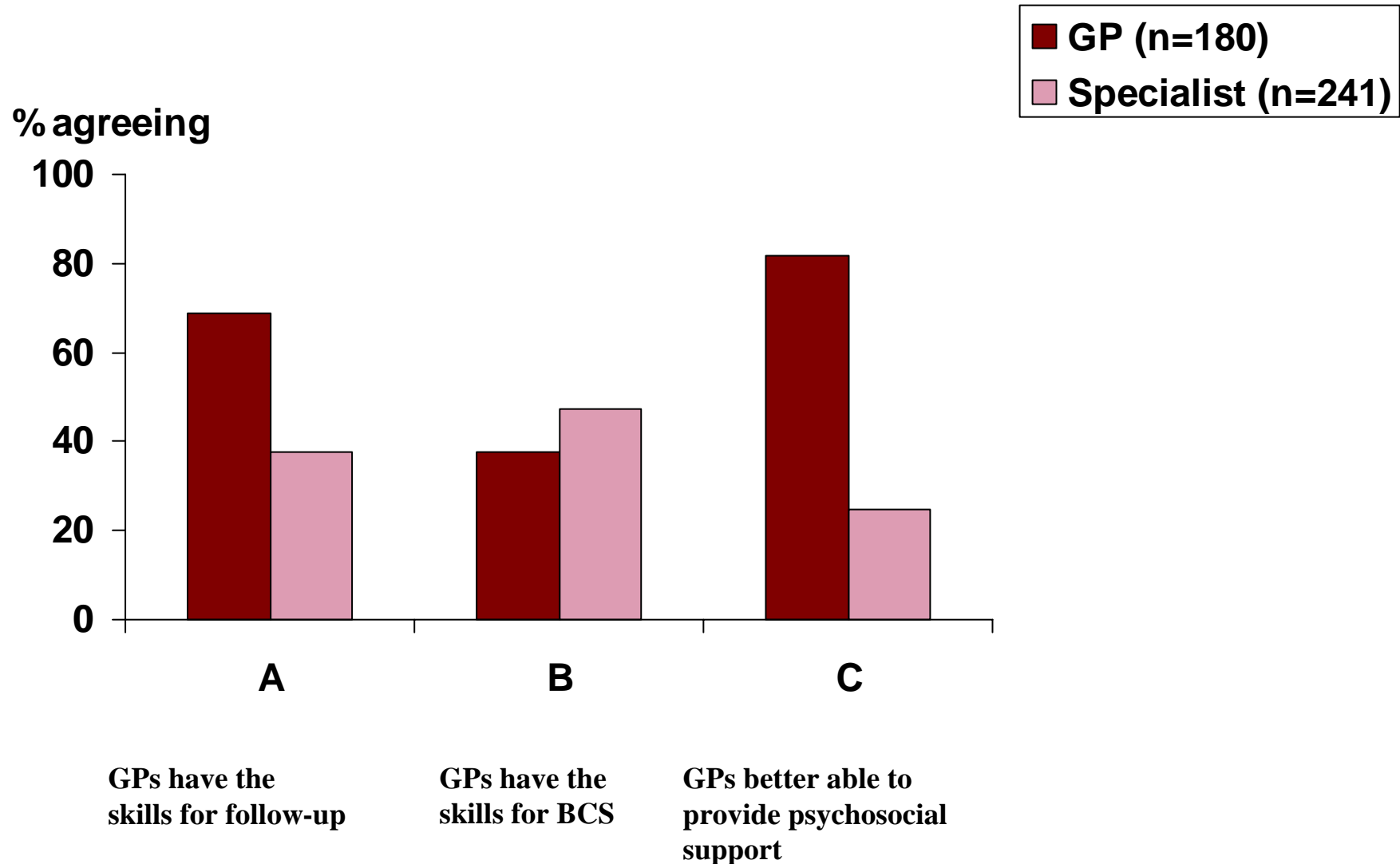
Testing a Primary Care Model of Follow-up

STUDY	YEARS	METHODS	SUBJECTS
Phase I	1991-1992	Focus Groups	Patients (England)
	1992-1993	Focus Groups	Patients (England)
	1992-1993	Survey	FPs (England)
	1992-1993	Survey	Specialists (England)
Phase II	1993-1994	RCT (n=296)	English Patients
Phase III	1997-2003	RCT (n=968)	Canadian Patients

Comparison of GP and Specialist Survey: views on patients' preferences

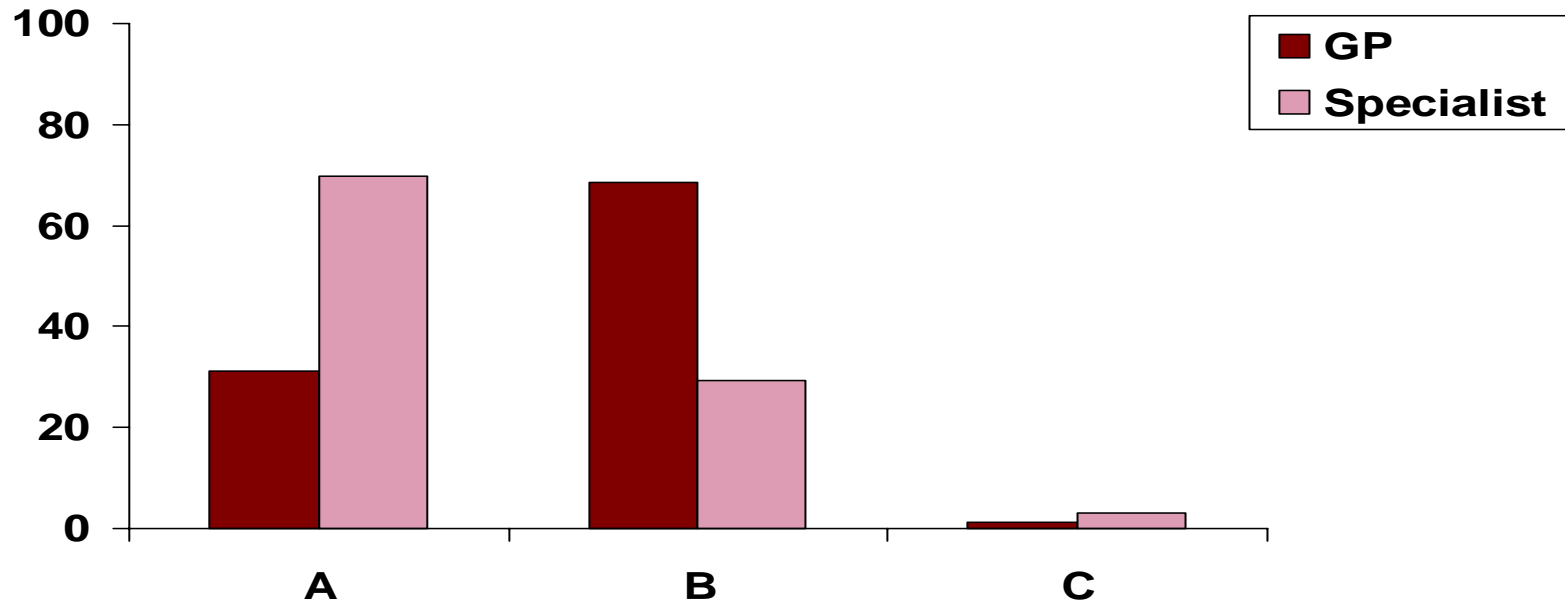


Comparison of GP and Specialist Survey: views on general practice follow-up



Comparison of GP and Specialist Responses: The “most preferred” system of follow-up

%



A=Routine follow up as currently practiced

B=Routine follow-up by patient's GP, referral to hospital if problems

C=No routine follow-up. Patients' to contact doctor if any problems develop

Patient Interview Study

- **109/145 = 78% response rate**
- **Qualitative analysis**
- **Patients in specialists care**
- **3 Themes identified**
 - ⇒ **Continuity of care**
 - ⇒ **Access to specialist care when needed**
 - ⇒ **Quality of the Consultation**

Adewuyi-Dalton et al, Psycho-Onc 1998

Theme: Continuity of Care

- ⇒ *I have more confidence in my own GP that I know than coming to see different people all the time.*
- ⇒ *It is difficult to ask a strange person questions - you need to get to know them first - but they don't give you that time.*
- ⇒ *I suppose they all have your notes so it shouldn't make any difference.*

Theme: Access to Specialist Care

- ⇒ *I thought it was better coming here. I always feel the GPs are a bit overworked and they can't be specialized in everything can they?*
- ⇒ *You feel so sort of secure and protected here.*
- ⇒ *I think for the first nine months I was happy with the hospital. I would not have wanted to be followed up by my GP in the initial stages.*

Theme: Quality of the Consultation

- ⇒ *They ask are you all right, then by the time you have said yes they turn and have gone.*
- ⇒ *They all ask the same questions. I didn't ask any questions until I saw the lady Dr. at 18 months after the operation. It was her that told me I'd had a growth taken away.*
- ⇒ *I'd have felt happier if I'd had a mastectomy as I'd have felt that it would have gone. But I wasn't asked. It wasn't all explained to me.*

Criteria for Satisfaction

- **Routine visits**
- **Accessibility**
- **Specialist skills/tests**
- **Continuity**
- **Information**

Koinberg et al Acta Oncol 2001

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Phase II: UK RCT of GP vs Specialist Follow-up

- *Setting:*

- ⇒ two district general hospitals in England

- *Participants:*

- ⇒ 296 women with breast cancer on follow-up through specialist clinics

- ⇒ 18 month study period

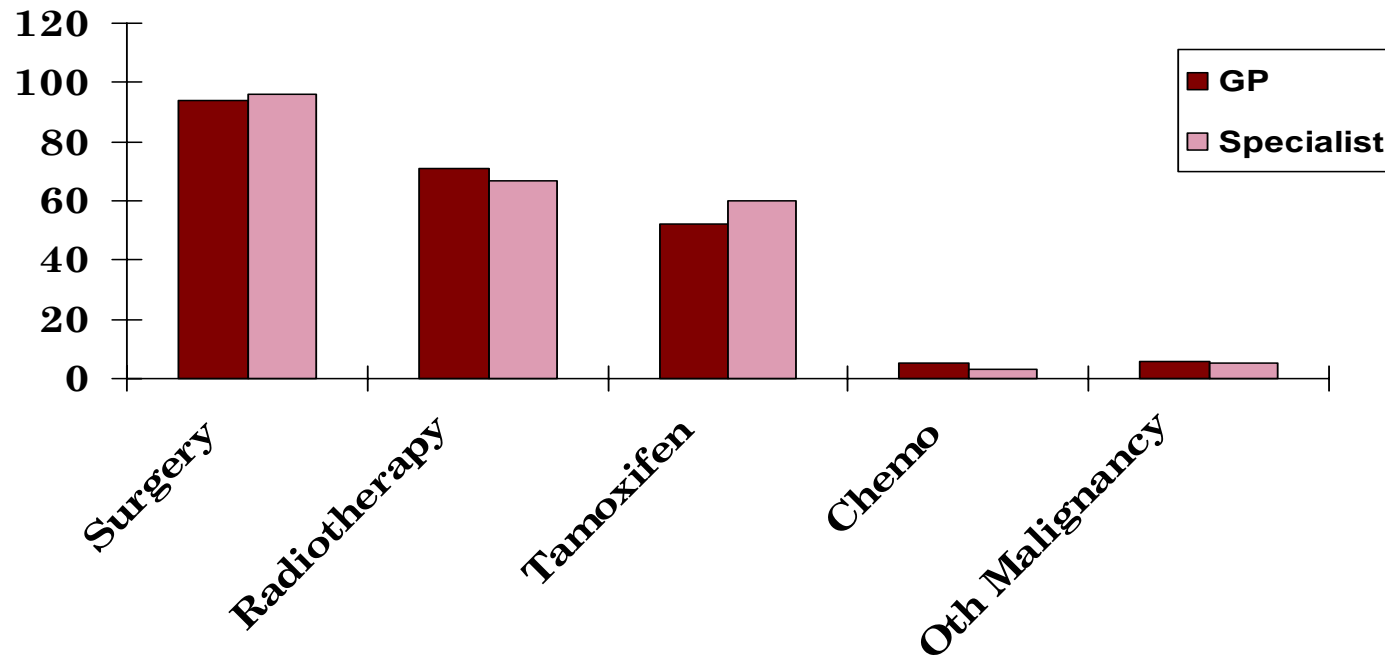
- *Randomization:*

- ⇒ Group 1 – continued specialist follow-up

- ⇒ Group 2 – follow-up from their own GP

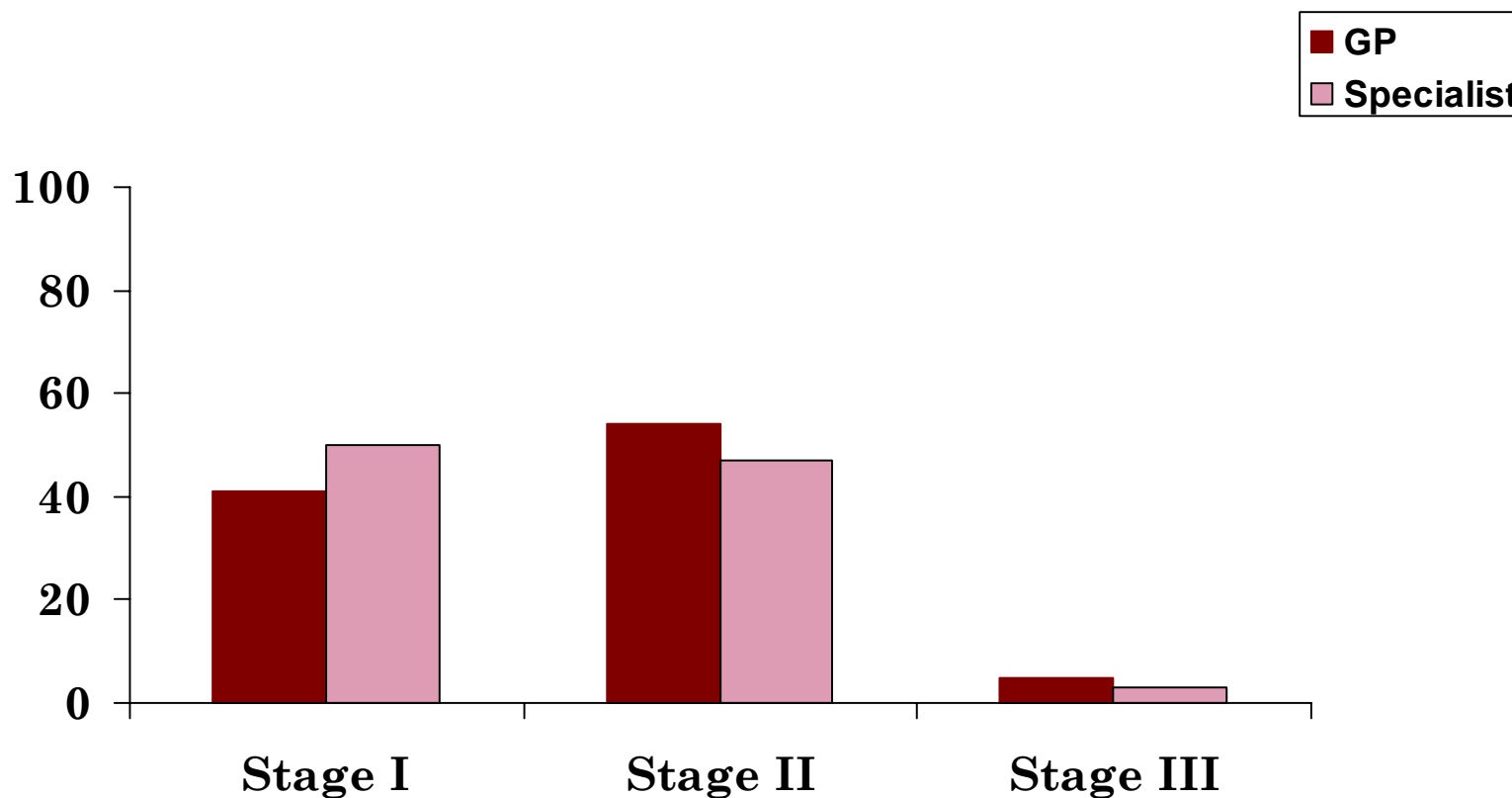
Characteristics of Participants

% % of patients having treatment/diagnosis



Characteristics of Participants (cont'd)

%



Progress of Participants and Response Rates

	GP Group	Specialist Group
Beginning of Trial		
Total Randomized (n=296; 66.5%)	148	148
Received intervention as allocated *	141	143
Response Rate to	99.3%	95.3%
Mid Trial		
Total Participants	144	142
Deceased	4	5
Moved	1	1
Adjusted response rate T1	97.2%	88.7%
End of Trial		
Total Participants	141	135
Total Deceased	6	12
Adjusted response rate T2	97.2%	88.1%

* GP group - 5 participants self-referred back to hospital; 2 GPs refused to provide follow-up

* Hospital group - 5 participants requested discharge to GP follow up

Clinical Course of Participants

	GP Group n=147	Hospital Group n= 147 †
Breast Cancer Recurrence		
Alive		
Local Recurrence	6	3
Distant Recurrence	4	7
Deceased		
Distant Recurrence	3	7
No Breast Cancer Recurrence		
Alive	131	126
Deceased of other causes	3	5

* No significant differences between groups

† One participant counted twice because of distant breast cancer recurrence and later deceased from CVA

Results – Phase II

Randomized Trial (18 months follow-up)	Trial Group		Difference (95%CI)
	GP n = 148	Specialist n = 141	
Time to diagnosis of recurrence (days)	22 days	21 days	1.5 (-13 to 22)
Total time with the patient (min)	35.6	20.7	14.9* (11.3 to 18.4)
Cost per patient (£s)	65	195	- 130 * (-149 to -112)
Time cost to the patient (min)	53	82	- 29 * (-37 to -23)

- No difference in health-related quality of life over time
- No difference in anxiety or depression over time
- GP patients more satisfied

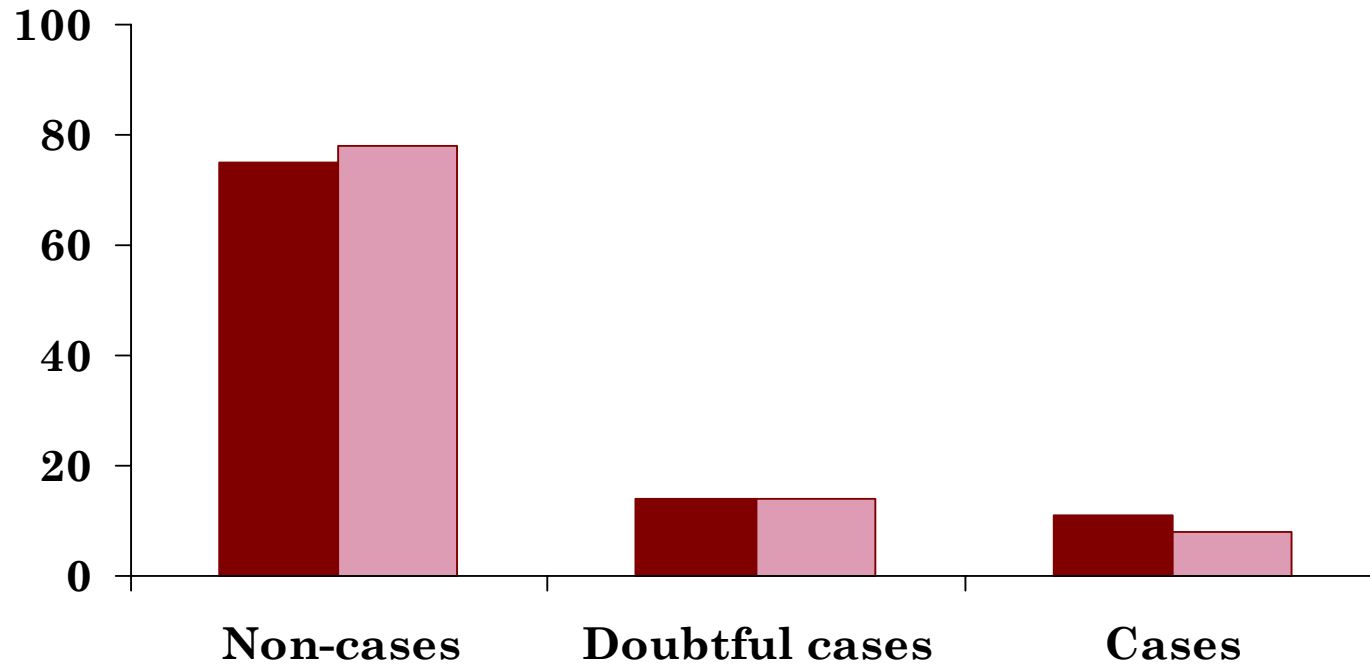
*p<0.001

Grunfeld et al BMJ 1996

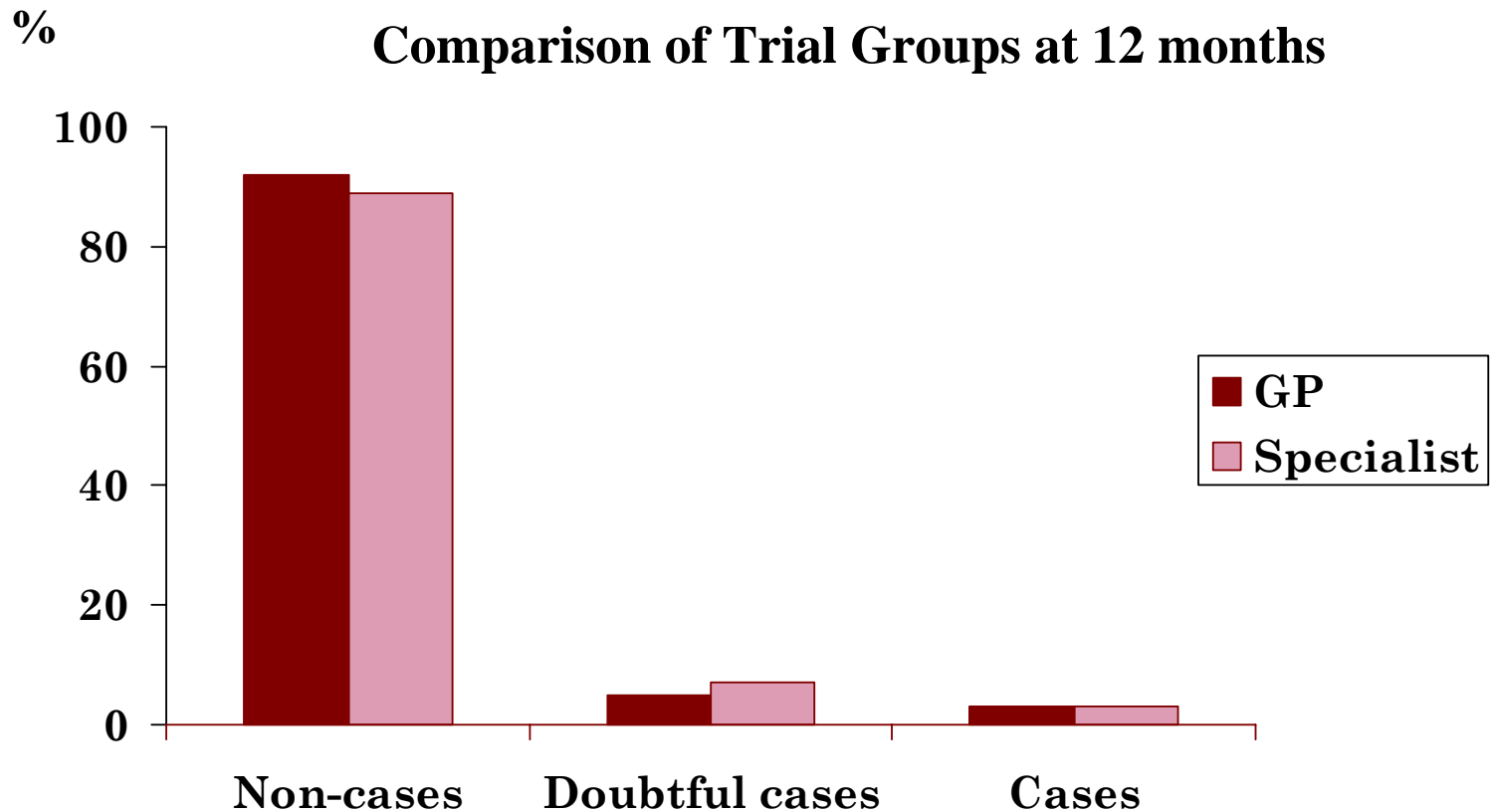
HADS: Anxiety

%

Comparison of Trial Groups at 12 months



HAD: Depression



non-cases: difference = 2.7 95% CI = - 4.5 to 9.8

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Phase III: Randomized Trial of Follow-up Strategies for Breast Cancer

Specific Objectives:

To determine whether family physician (FP) based routine follow-up of women with breast cancer is an acceptable alternative to the existing system of specialist based follow-up.

Patients

- Early stage breast cancer
- Completed adjuvant therapy (continued Tamoxifen)
- Disease free
- 9-15 months post-diagnosis



FP Group

- Follow-up by patient's FP
- Guideline (1 page)
- Refer back to CC if recurrence or new cancer

CC Group

- Follow-up at cancer center
- Usual practice

Outcome Measures

- **Primary Outcome**

- ⇒ **If Recurrence**

- **Event rate of major clinical events**

- (e.g., pathological fractures, spinal cord compression, uncontrolled local recurrence, hypercalcemia)**

Secondary Outcomes

- **Quality of life without recurrence**
 - ⇒ SF36 and HADS - every 6 months x 2 years then yearly
- **Quality of life at recurrence**
 - ⇒ EORTC QLQ C30 – at recurrence
- **Patient satisfaction**
 - ⇒ PSQ - every 6 months x 2 years then yearly
- **Patient costs**
 - ⇒ Patient costs measured prospectively by means of a patient diary

- **968 patients were enrolled from tertiary cancer centres in Ontario Canada**
 - ⇒ **483 in family physician Group (FP Group)**
 - ⇒ **485 in cancer centre group (CC Group)**
- **median follow-up was 3.5 years (4.5 years after diagnosis)**

Journal of Clinical Oncology

Volume 24, Number 6, February 10, 2006: 848-855

Randomized Trial of Long-Term Follow-Up for Early-Stage Breast Cancer: A Comparison of Family Physician Versus Specialist Care

**Eva Grunfeld, Mark N. Levine, Jim A. Julian, Doug Coyle, Barbara Szechtman,
Doug Mirsky, Shalendara Verma, Susan Dent, Carol Sawka, Kathleen I. Pritchard,
David Ginsberg, Marjorie Wood, and Tim Whelan**

Characteristic	Family Physician Group (N=483)	Cancer Centre Group (N=485)
Age at Enrollment (yr):	no.(%)	no.(%)
< 40	21 (5)	17 (4)
40-49	79 (16)	82 (17)
50-59	136 (28)	113 (23)
60-69	119 (25)	143 (30)
≥ 70	128 (27)	130 (27)
mean (minimum-maximum)	60.9 (25-89)	60.9 (32-92)
Education:		
< secondary	140 (29)	141 (29)
completed secondary	126 (26)	148 (31)
post-secondary	208 (43)	189 (39)
Marital Status:		
single	26 (5)	28 (6)
married/cohabiting	319 (66)	323 (67)
widow	90 (19)	90 (18)
separated/divorced	48 (10)	44 (9)
Tumour Size (cm):		
0-2	349 (72)	340 (70)
>2-5	124 (26)	130 (27)
>5	5 (1)	9 (2)
Nodes positive:		
0	337 (70)	328 (68)
1-3	82 (17)	90 (18)
4 or more	22 (5)	22 (5)
unknown	42 (9)	45 (9)
Tumour grade:		
1	157 (32)	148 (30)
2	178 (37)	199 (41)
3	102 (21)	105 (22)
unknown	46 (10)	33 (7)
ER status:		
positive	345 (71)	339 (70)
borderline	15 (3)	15 (3)
negative	93 (19)	95 (20)
not done	30 (6)	36 (7)
Type of surgery:		
lumpectomy	358 (74)	352 (73)
mastectomy	93 (20)	95 (20)
biopsy only	31 (6)	37 (7)
Treatment:		
radiation	361 (75)	388 (80)
chemotherapy	132 (27)	121 (25)
hormones	240 (50)	275 (57)
none	35 (7)	20 (4)

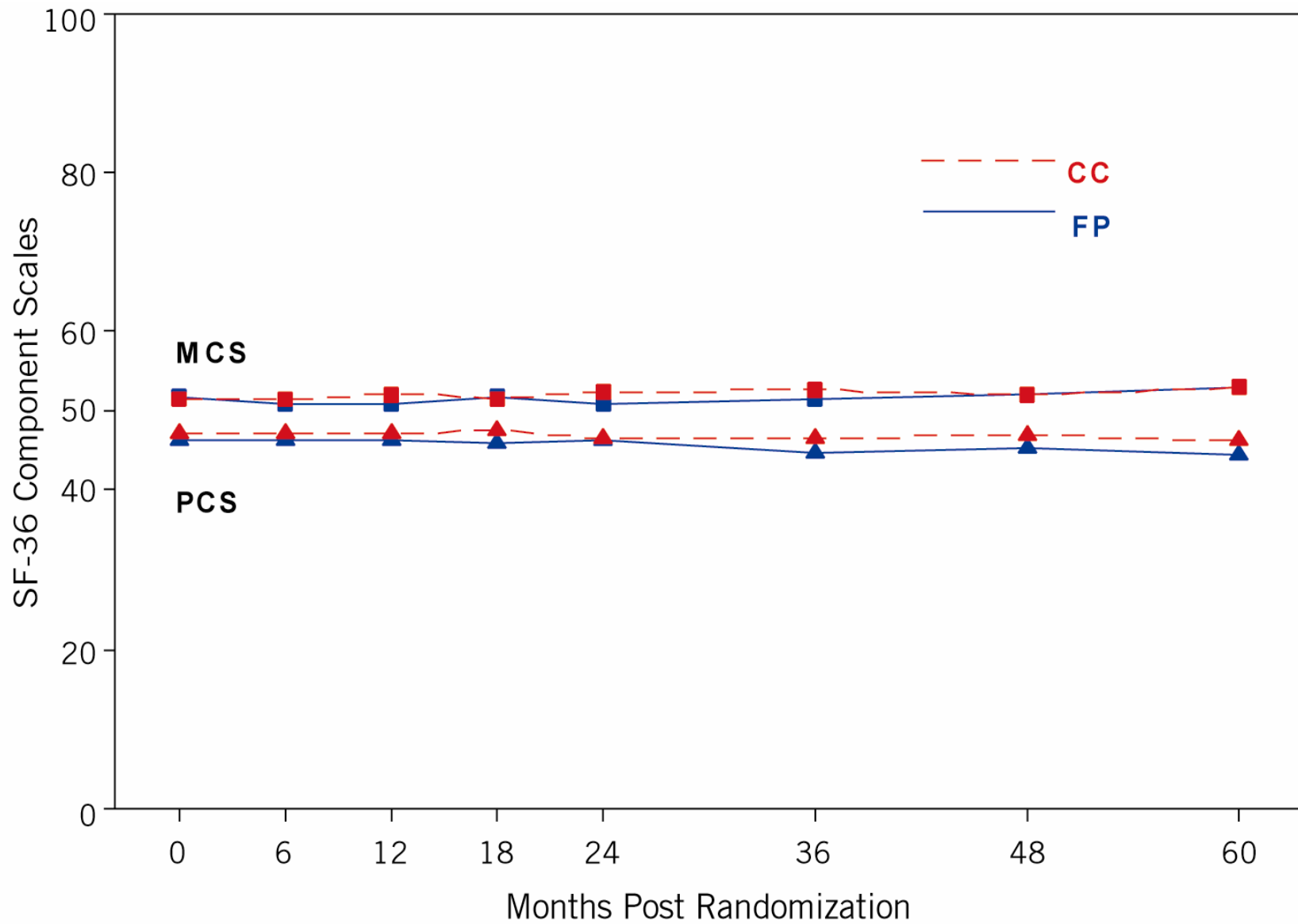
Outcome Event	Family Physician (FP) Group (n=483)	Cancer Centre (CC) Group (n=485)	Risk Difference CC – FP (95% CI)
Number of Patients (%)			
Recurrence	54 (11.2%)	64 (13.2%)	2.02% (-2.13, 6.16)
Distant^a	36	38	
Local^a	10	12	
Contralateral^a	11	15	
Death (All Causes)	29 (6.0%)	30 (6.2%)	0.18% (-2.90, 3.26)
Serious Clinical Events	17 (3.5%)	18 (3.7%)	0.19% (-2.26, 2.65)
Spinal Cord compression^b	0	1	
Pathological fracture^b	3	8	
Uncontrolled local recurrence^b	2	0	
KPS ≤ 70^b	14	18	
Brachial plexopathy^b	0	0	
Hypercalcemia^b	2	2	

^a 4 patients had more than one recurrence: FP group - 3 cases with local and distant recurrences: CC group - 1 case with distant recurrence and contralateral breast cancer.

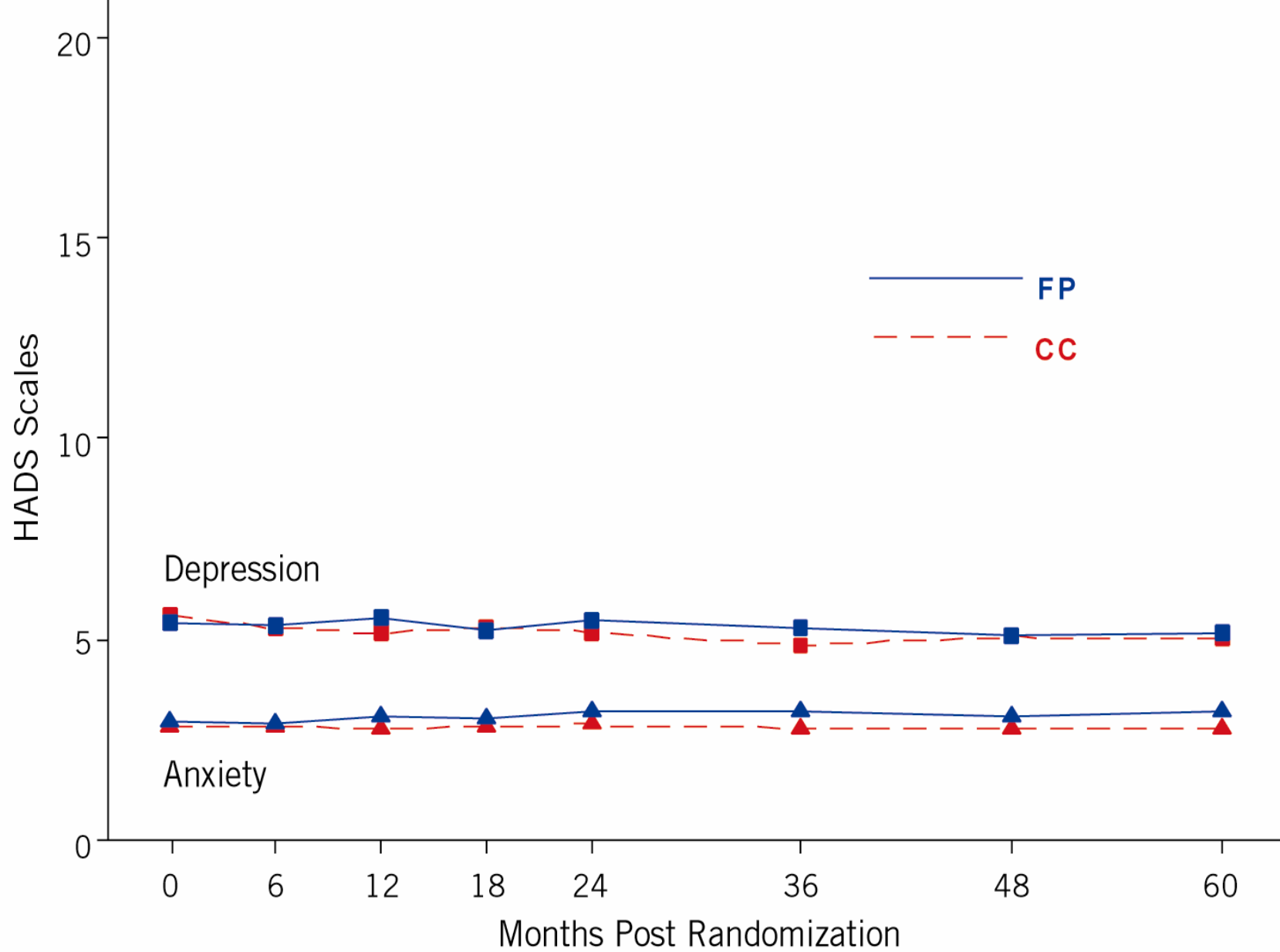
^b 13 patients had more than one SCE

FP Group: 1 case with pathological fracture and KPS ≤70; 1 case with hypercalcemia and KPS ≤ 70; and 1 case with pathological fracture, KPS ≤70, and hypercalcemia.

CC Group: 7 cases with pathological fracture and KPS ≤ 70; 2 patients with hypercalcemia and KPS ≤ 70, 1 case with pathological fracture, KPS ≤ 70, and spinal cord compression).



Number of Responses	CC:	468	438	425	394	384	292	187	101
	FP:	467	427	415	390	369	275	184	104

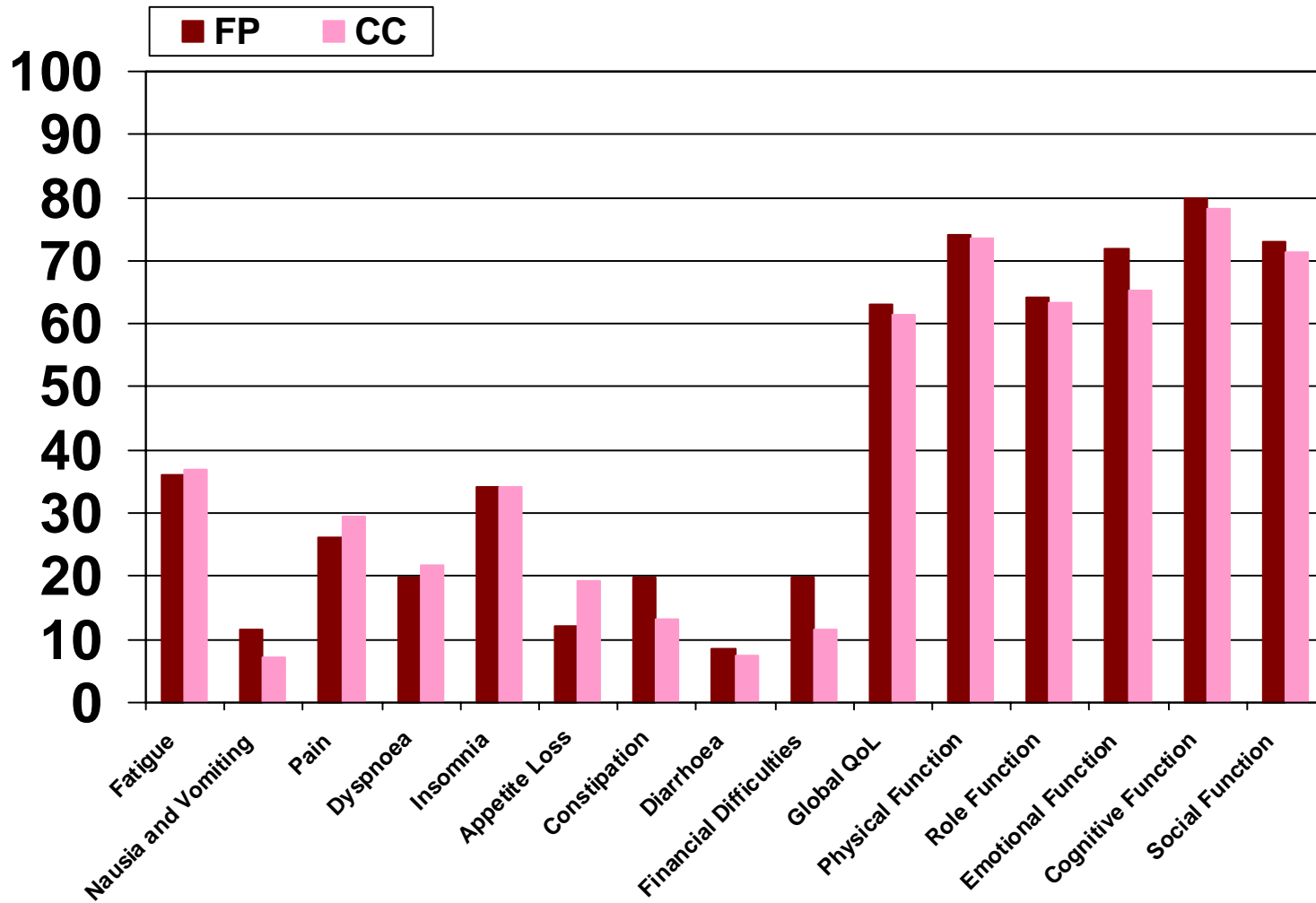


Number of	FP:	472	438	418	394	372	278	189	107
Responses	CC:	478	443	430	405	394	300	193	108

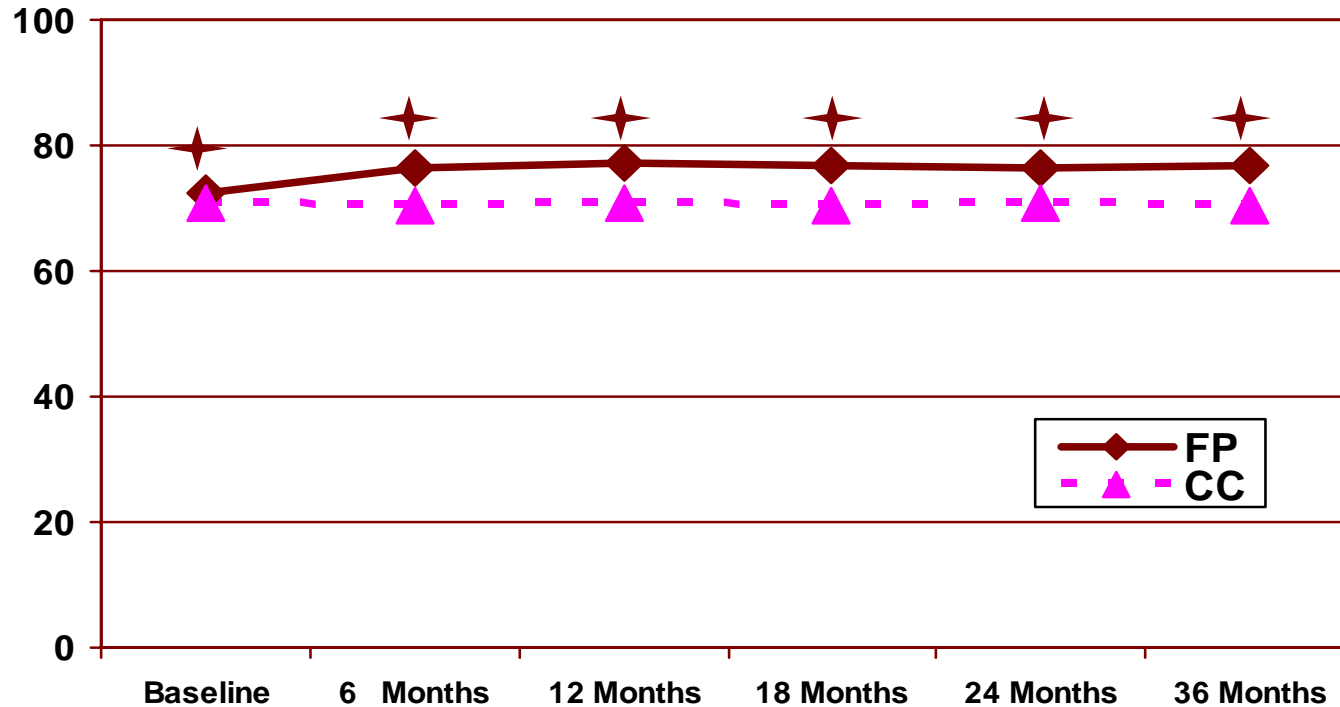
DOMAIN	Change from Baseline to 6 Months ¹	Change from Baseline to 12 Months ²	Change from Baseline to 24 Months ³
	CC-FP Diff (95% CI)	CC-FP Diff (95% CI)	CC-FP Diff (95% CI)
SF36 subscales:			
Physical function	-0.5 (-2.6, 1.5)	-1.4 (-3.7, 0.9)	-2.4 (-5.1, 0.3)
Social function	0.5 (-2.5, 3.5)	0.7 (-2.3, 3.7)	1.6 (-1.7, 4.8)
Role, physical	1.3 (-3.5, 6.1)	1.2 (-3.8, 6.2)	3.5 (-1.6, 8.8)
Role, emotional	0.5 (-4.5, 5.6)	3.7 (-1.1, 8.5)	5.9 (0.7, 11.1)*
Vitality	0.1 (-2.0, 2.1)	1.5 (-0.7, 3.8)	1.4 (-0.9, 3.7)
Pain	-0.1 (-2.0, 1.8)	1.7 (-0.2, 3.6)	1.7 (-0.4, 3.9)
Emotional well being	-0.4 (-3.1, 2.3)	1.7 (-1.2, 4.5)	1.4 (-1.8, 4.6)
General Health	0.9 (-1.0, 2.7)	1.7 (-0.3, 3.7)	-0.7 (-2.9, 1.4)

Response Rates: **1. >90%,** **2. > 89%** **3. >83%** ***p=0.05**

Mean EORTC QOL-C30 Symptom Subscales and Function Subscales at Recurrence



PSQ Mean Scores from Baseline to 3 years



★ p < 0.0001

Number of Responses	CC	475	439	423	400	389	296
	FP	469	433	411	386	371	277

Economic Outcome

- **305 patients participated in the economic substudy**
- **No difference between groups on baseline characteristics**
- **Compared to study population**
 - ⇒ **less likely to have completed secondary education**
 - ⇒ **similar on all disease characteristics**

MEAN NUMBER OF PHYSICIAN VISITS PER YEAR AND OVER 3 YEARS

Mean (SD)

TYPE OF VISIT	GROUP	Year 1 (n= 305)	Year 2 (n=280)	Year 3 (n=213)	Over 3 years (n=185)§
FP	FP	4.9 (2.9)*	4.0 (3.3) <i>f</i>	3.2 (3.1)	13.6 (7.9)*
	CC	3.6 (3.7)	3.2 (2.8)	2.7 (2.7)	9.5 (7.4)
CANCER SPECIALIST	FP	0.7 (1.1)*	0.6 (0.9)*	0.5 (0.9)*	1.8 (2.5)*
	CC	2.0 (1.5)	1.7 (1.2)	1.1 (0.9)	5.6 (2.6)
CANCER SURGEON	FP	0.4 (0.8)	0.2 (0.5)	0.1 (0.3) <i>f</i>	0.8 (1.4)
	CC	0.5 (0.9)	0.4 (0.8)*	0.3 (0.7)	1.2 (1.6) <i>f</i>
OTHER PHYSICIAN	FP	1.0 (1.6)	1.3 (2.7)	0.9 (2.2)	3.5 (5.3)
	CC	1.2 (2.3)	1.0 (1.8)	0.9 (2.5)	3.1 (5.2)
OTHER VISIT	FP	2.1 (2.9) <i>f</i>	2.3 (2.9)	2.0 (2.6)	6.9 (7.4)
	CC	3.0 (3.7)	2.7 (3.4)	1.8 (1.7)	7.5 (6.8)

* p<0.008; *f* p<0.05; § Number with three full years of data.

TYPE OF TEST	GROUP	MEAN (SD)			
		Year 1 (n=305)	Year 2 (n=280)	Year 3 (n=213)	Over 3 years (n=185)§
MAMMOGRAM	FP	0.9 (0.8)	0.7 (0.7)	0.7 (0.6)	2.4 (1.4)
	CC	0.8 (0.7)	0.8 (0.7)	0.7 (0.6)	2.5 (1.1)
CHEST X-RAY	FP	0.3 (0.7)	0.3 (0.5)	0.3 (0.5)	0.9 (1.3)
	CC	0.3 (0.6)	0.4 (0.6)	0.3 (0.5)	0.9 (1.3)
BONE SCAN	FP	0.3 (0.6)	0.2 (0.5)	0.2 (0.5)	0.7 (1.1)
	CC	0.2 (0.4)	0.2 (0.5)	0.1 (0.3)	0.6 (0.9)
ULTRASOUND	FP	0.5 (0.8)	0.6 (1.0)	0.3 (0.7)	1.6 (1.8)
	CC	0.4 (0.8)	0.5 (0.8)	0.3 (0.6)	1.3 (1.7)

§ Number with three full years of data.

TYPE OF TEST	GROUP	MEAN (SD)			
		Year 1 (n=305)	Year 2 (n=280)	Year 3 (n=213)	Over 3 years (n=185)§
HIP X-RAY	FP	0.0 (0.2)	0.1 (0.3)	0.0 (0.1)	0.1 (0.3)
	CC	0.1 (0.3)	0.1 (0.2)	0.0 (0.1)	0.2 (0.5)
OTHER X-RAY	FP	0.2 (0.5) <i>f</i>	0.2 (0.4) <i>f</i>	0.2 (0.7)	0.6 (0.8)*
	CC	0.4 (0.8)	0.3 (0.8)	0.2 (0.5)	1.0 (1.4)
BIOPSY	FP	0.1 (0.4)	0.2 (0.5)	0.0 (0.2)	0.3 (0.7)
	CC	0.1 (0.4)	0.2 (0.5)	0.1 (0.3)	0.4 (0.8)
BLOOD TESTS	FP	1.3 (1.4)	1.1 (1.4) <i>f</i>	1.0 (1.1)	3.6 (0.3)
	CC	1.6 (1.8)	1.6 (1.9)	1.2 (1.7)	4.2 (3.9)
OTHER TESTS	FP	1.8 (2.0)	1.7 (2.2)	1.5 (2.3)	5.3 (5.5)
	CP	2.4 (3.4)	2.1 (3.2)	1.2 (1.7)	5.6 (6.1)

*p<0.008; *f* p<0.05; § Number with three full years of data.

		MEAN (SD) \$Canadian			
		Year 1 (n=305)	Year 2 (n=280)	Year 3 (n=213)	Over 3 years (n=185)§
COSTS	GROUP				
TRAVEL COSTS FOR PHYSICIANS VISITS	FP	189.02 (137.66)**	181.45 (163.70)*	146.48 (148.97)	558.15 (390.43)*
	CC	257.32 (191.58)	222.07 (154.67)	164.25 (135.48)	674.07 (392.16)
OTHER COSTS					
OTHER COSTS	FP	7.47 (5.11)**	7.04 (5.94)	5.70 (5.49)	21.92 (14.46)
	CC	9.53 (7.08)	8.27 (5.63)	6.17 (4.84)	24.97 (14.34)

Significant: ** p<0.004; * p<0.05; § Number with three full years of data.

f Direct costs related to visits additional to travel (e.g., parking)

Acceptability

- **5 Ontario RCCs participate**
- **84% of FPs agree to provide f/u**
- **82% of surgeons agree**
- **80% of oncologists agree**
- **56% of patients participate**

Conclusions

For woman with early stage breast cancer FP follow-up is a safe and acceptable alternative to the existing practice of specialist follow-up.

- **no difference in clinical outcomes**
 - **no difference in QL outcomes**
 - **patient satisfaction is higher**
 - **patient costs are less**
- **These results have now been shown into two RCTs in two different health care settings.**
 - **Patients should make an informed choice about their follow-up arrangements.**

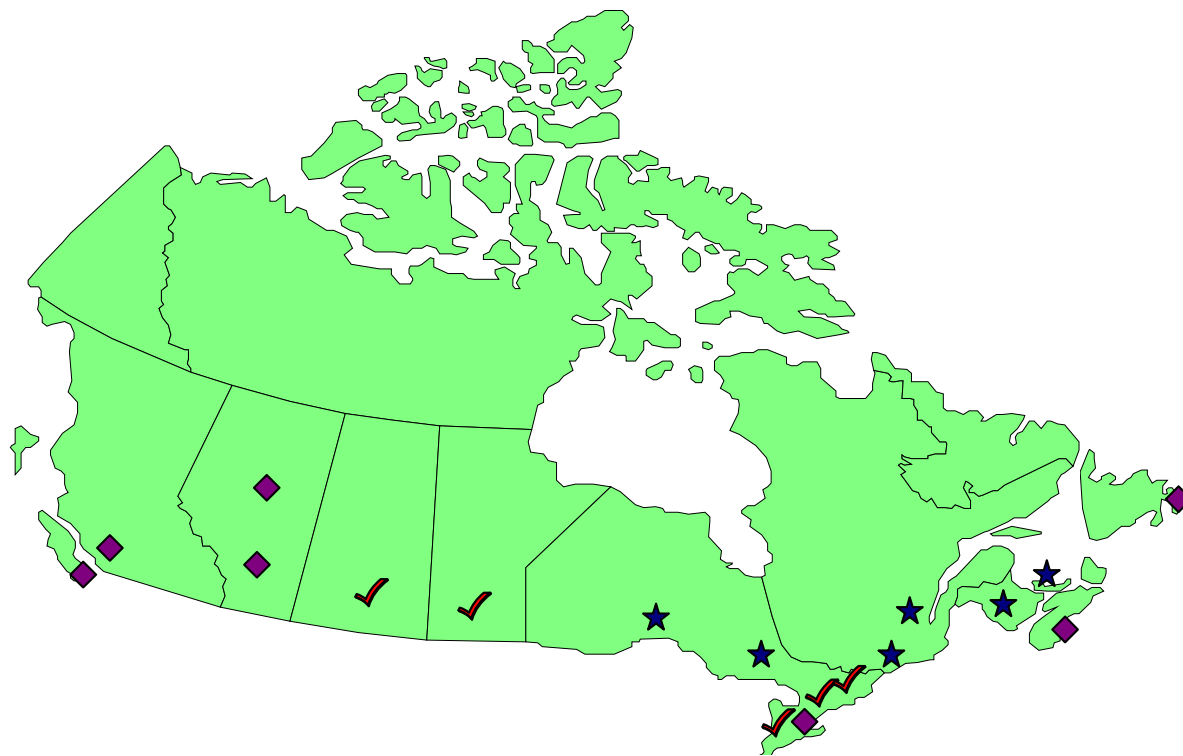
Future Research

- **Phase IV – implementation study**
- **Population database study of cancer follow-up care in two provinces**
- **Further qualitative studies**
- **Electronic decision support tool based on guidelines for family physician offices**
- **Mammography surveillance**
- **Mammography surveillance after breast reconstruction**

Testing a Primary Care Model of Breast Cancer Follow-up Care

STUDY	YEARS	METHODS	SUBJECTS
Phase I	1991-1992	Focus Groups	Patients (England)
	1992-1993	Focus Groups	Patients (England)
	1992-1993	Survey	PCPs (England)
	1992-1993	Survey	Specialists (England)
Phase II Phase III	1993-1994	RCT (n=296)	English Patients
	1997-2003	RCT (n=968)	Canadian Patients
Phase IV	2007 +	RCT (n=400)	Canadian Patients

Current Follow-Up Practices at Selected Cancer Centres in Canada

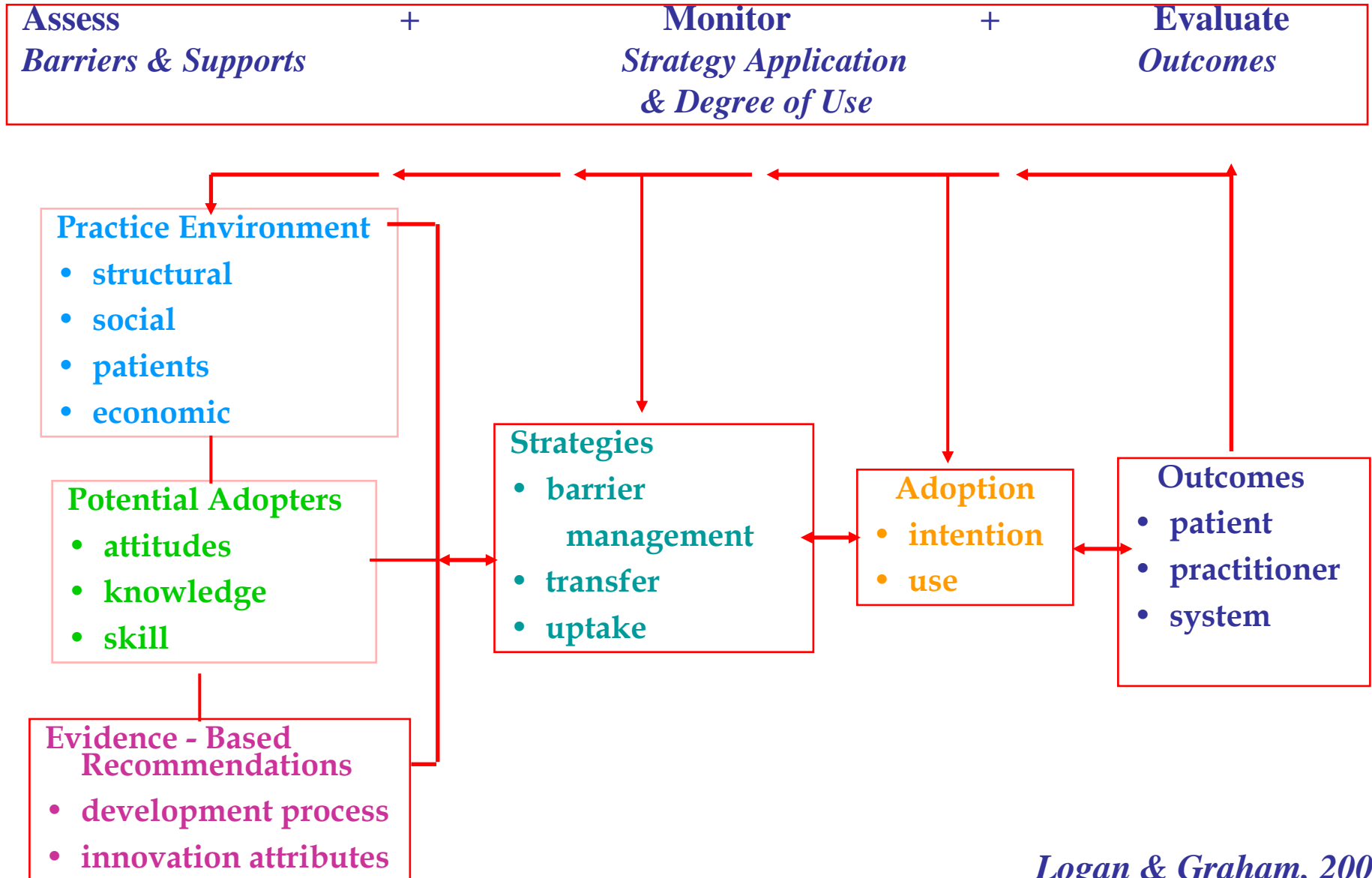


★ Longterm in cancer centre

◆ Transfer of Care to FP

✓ Variable

Ottawa Model of Research Use



The Ottawa Model of Research Use (OMRU)

Six components addressing fundamental elements in the research use process:

- 1. the practice environment**
- 2. potential adopters**
- 3. the evidence-based recommendations to be used in practice**
- 4. strategies to manage barriers and transfer evidence into practice**
- 5. adoption of the evidence-based product**
- 6. outcomes**

Logan, Graham (2002). *Science communication*

OMRU cont'd...

6 elements are examined in 3 steps (iterative process):

1. Assess (assess the barriers and supporters)

- assess the practice environment
- assess potential adopters
- assess the evidence-based innovation

2. Monitor (monitor the implementation)

- monitor the KT strategy
- monitor adoption of the innovation

3. Evaluate the outcomes

Application of OMRU

- Stakeholder meeting (medical, radiation, surgical oncology, family physicians) evaluated factors related to adoption
 - **evaluated each stage of adoption using the OMRU as an implementation framework**
 - **barriers and supports were identified and strategies decided upon**
 - **the discussion was recorded and a table was created to clearly identify each stage of the OMRU**

ASSESS

1. PRACTICE ENVIRONMENTS:

- ⇒ Cancer Center
- ⇒ Family Physician Office
- ⇒ Patients

2. POTENTIAL ADOPTERS:

- ⇒ Specialists
- ⇒ Family Physicians
- ⇒ Patients

3. EVIDENCE BASED RECOMMENDATION

Phase IV: Implementation Study

- **Overall Objective:**

- ⇒ **To determine if a patient-centred intervention for breast cancer survivors who are medically ready for transition from specialist care to primary care improves patient and health service outcomes**

- **Design:**

- ⇒ **Multicentre RCT**

- ⇒ **Halifax, Quebec City, Montreal, Ottawa, Toronto, Hamilton, Edmonton, Calgary**

Study Centres

Funding: NCIC/CBCRA

Halifax	Eva Grunfeld, Danny Rayson, Dorianne Rheaume, Geoff Porter, Dianna Schreuer, Amy Lewis
OCOQ	Mark Levine, Jim Julian, Barbara Szechtman
Quebec City	Elizabeth Maunsell, Louise Provencher
Montreal	Andre Robidoux, Marie- Dominique Beaulieu
Ottawa	Susan Dent, Doug Coyle
Toronto	Larry Paszat, Kathy Pritchard, Lisa DelGiudice
Hamilton	Jonathan Sussman, Jennifer Wiernikowski
Edmonton	Anil Joy
Calgary	Sasha Lupichuk

Phase IV: Implementation Study

- **Patients:**

- ⇒ **200 < 24 months post diagnosis**

- ⇒ **200 ≥ 24 months post diagnosis**

- **Intervention:**

- ⇒ **Guideline for family physician**

- ⇒ **Guideline for patient**

- ⇒ **Educational session for patient (30 minutes)**

- ⇒ **Care plan for patient**

- **including plan for initiating aromatase inhibitor, according to oncologist's recommendation**

Phase IV: Implementation Study

- **Patient outcomes:**

- ⇒ **adjustment to breast cancer at 12 months**

- ⇒ **Impact of Events Scale**

- ⇒ **other HRQL domains ⇒ POMS; SF36**

- ⇒ **patient satisfaction ⇒ MOS-PSQ**

- **Health service outcomes over 24 months:**

- ⇒ **adherence to guideline**

- ⇒ **patients declining transfer to FP or return to CC**

- ⇒ **continuity and coordination of care**

Preventive care by type of health care provider

	NO		SPECIALIST	
	REGULAR	FP ONLY	ONLY	BOTH
MAMMOGRAMS	30.3	60.7	80.3	86.7
FLU VACCINE	28.1	62.6	59.1	70.1
LIPID TESTING	20.4	42.1	34.5	54.9
PAP TEST	3.2	24.7	12.3	38.8
COLON TEST	1.4	12.6	10.8	21.2
BMD	1.4	7.0	8.9	9.9

Earle et al J Clin Oncol 2003

Population database study

- **Overall objective**

- ⇒ To gain a better understanding of the patterns of routine follow-up care provided to survivors of breast cancer in Ontario and Nova Scotia.

- **Design**

- ⇒ Cohort study involving all patients diagnosed with breast cancer between 01Jan99 to 31Dec00 and followed to 5 years post diagnosis.

- **Deterministic record linkage with administrative datasets to measure**

- ⇒ frequency of tests

- ⇒ frequency of visits

- ⇒ health care providers

- ⇒ provision of general preventive health care

Conclusions

- **Growing prevalence of breast cancer**
- **Change in perspective: from acute life threatening disease to chronic disease**
- **Surveillance for recurrence and new primary cancer are important**
- **General medical and preventive care becoming more important**
- **Evidence of safety and acceptability of devolving care in the community**