

# The impact of cancer-related fatigue on breast cancer survivors

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# Breast Cancer

- most frequent female cancer;  
~25% of all new cancer dx
- majority dx at a localized stage=5-year survival rate of 96%
- All BrCa tx's can result in side-effects that may persist after treatment (**long-term effects**).
- new **late-effects** may also manifest months or even years after treatment ends.



# Cancer Related Fatigue

- CRF is defined as:  
“...a distressing persistent, subjective sense of physical, emotional and/or cognitive tiredness related to cancer or cancer treatment that is not proportional to recent activity and interferes with usual functioning”



# Cancer-related Fatigue

- the most important, problematic & distressing side effect
- causes the greatest interference with daily life
- during tx: >70%
- post-treatment: ~30-40%
- may persist for months/years after tx
- largely unrecognized and poorly managed
- etiology is multifactorial

# Cancer-related Fatigue

- CRF consistently reported to be associated with lower QoL, depression, physical symptom burden
- little is known about experience of CRF in cancer survivors



# Study Objectives

To assess and compare in a sample of disease-free breast cancer survivors both with and without cancer-related fatigue:

Work status, absenteeism and presenteeism

Social distress

Health service and social service utilization

# Rationale

This information will be useful to:

1. further understand the impact of CRF on the lives of cancer survivors
2. highlight the need for active screening procedures and interventions
3. provide information on relevant outcome measure for future intervention studies.

# Participants

## Inclusion

- 1-5 years of completing primary treatment for early stage (0-III) breast cancer
- not receiving current cancer therapies other than adjuvant hormone therapy

## Exclusion

- evidence of recurrent or metastatic disease
- non-English speaking/reading
- age <18 years

# Procedure

- Cross-sectional study
- questionnaire completed at follow-up clinics

## Fatigue

- Functional Assessment of Cancer Therapy-Fatigue (FACT-F)

## Social Functioning

- Social Difficulties Inventory (SDI)

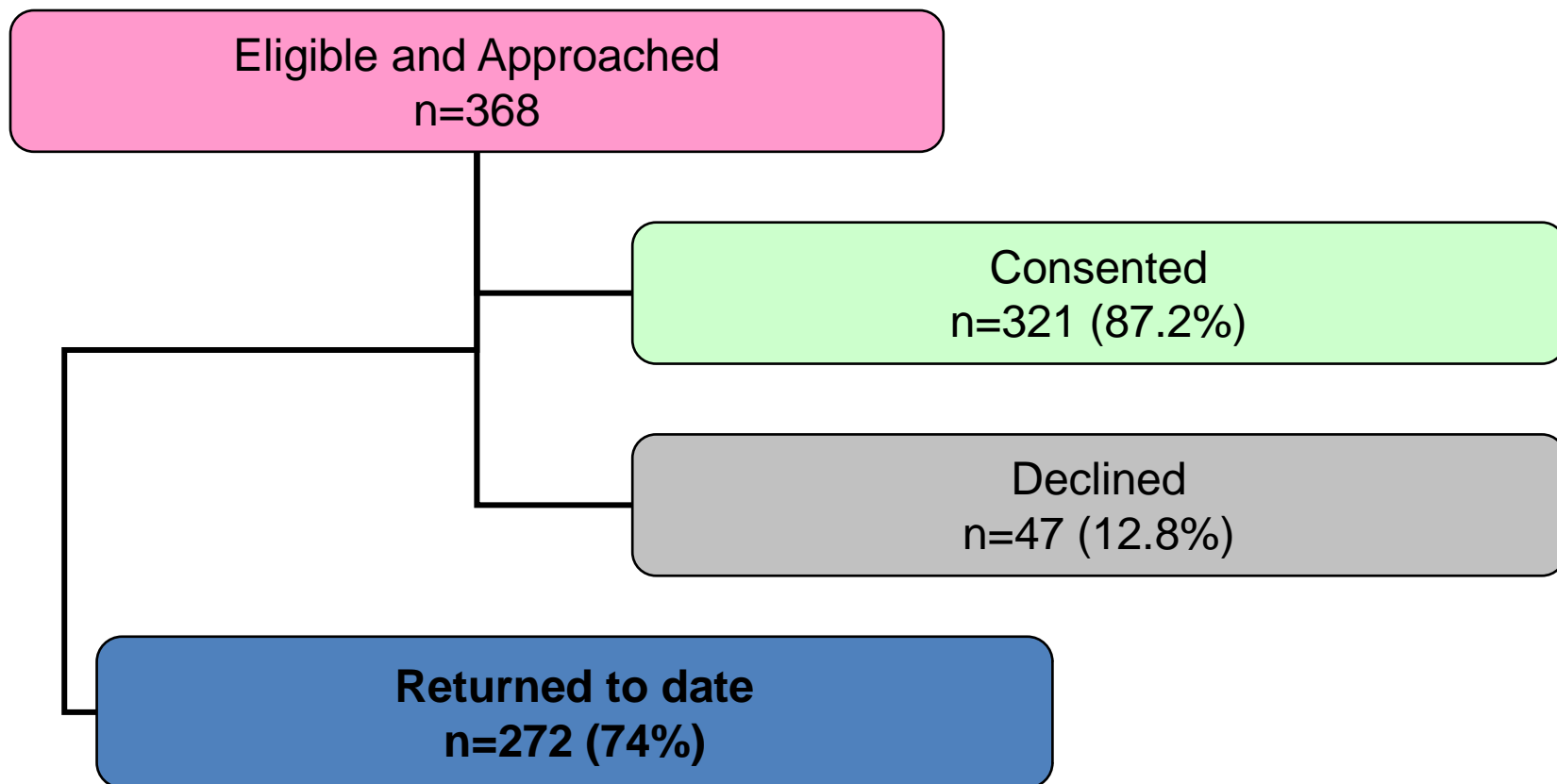
## Work Performance

- World Health Organization's Health and Work Performance Questionnaire (HPQ)

## Health Care Utilization

- Health Services Utilization Questionnaire-modified

# Recruitment

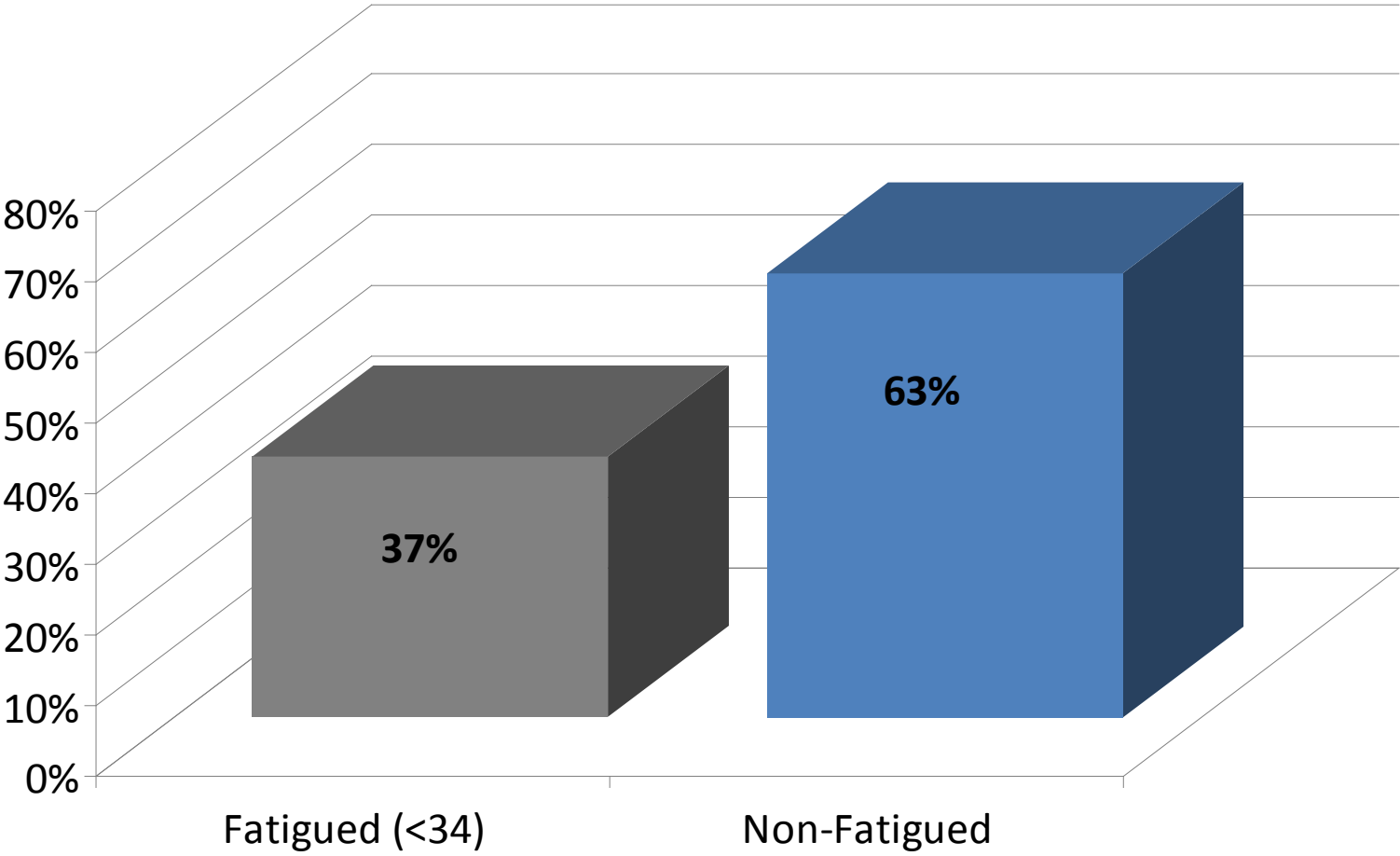


# Demographics

Variable	Frequency	Percentage
Age (mean)	55.8 $\pm$ 11.1	
Married (yes)	181	66.5
Completed College	207	79.7
Born in Canada (yes)	147	54.0
Income >90,000	106	39.0*
Treatment Surgery	251	92.3
Chemo	194	71.3
Radiation	220	80.9
Hormones (yes)	174	66.4

Results: Sample

# FACT-F cut-off ( $\leq 34$ )

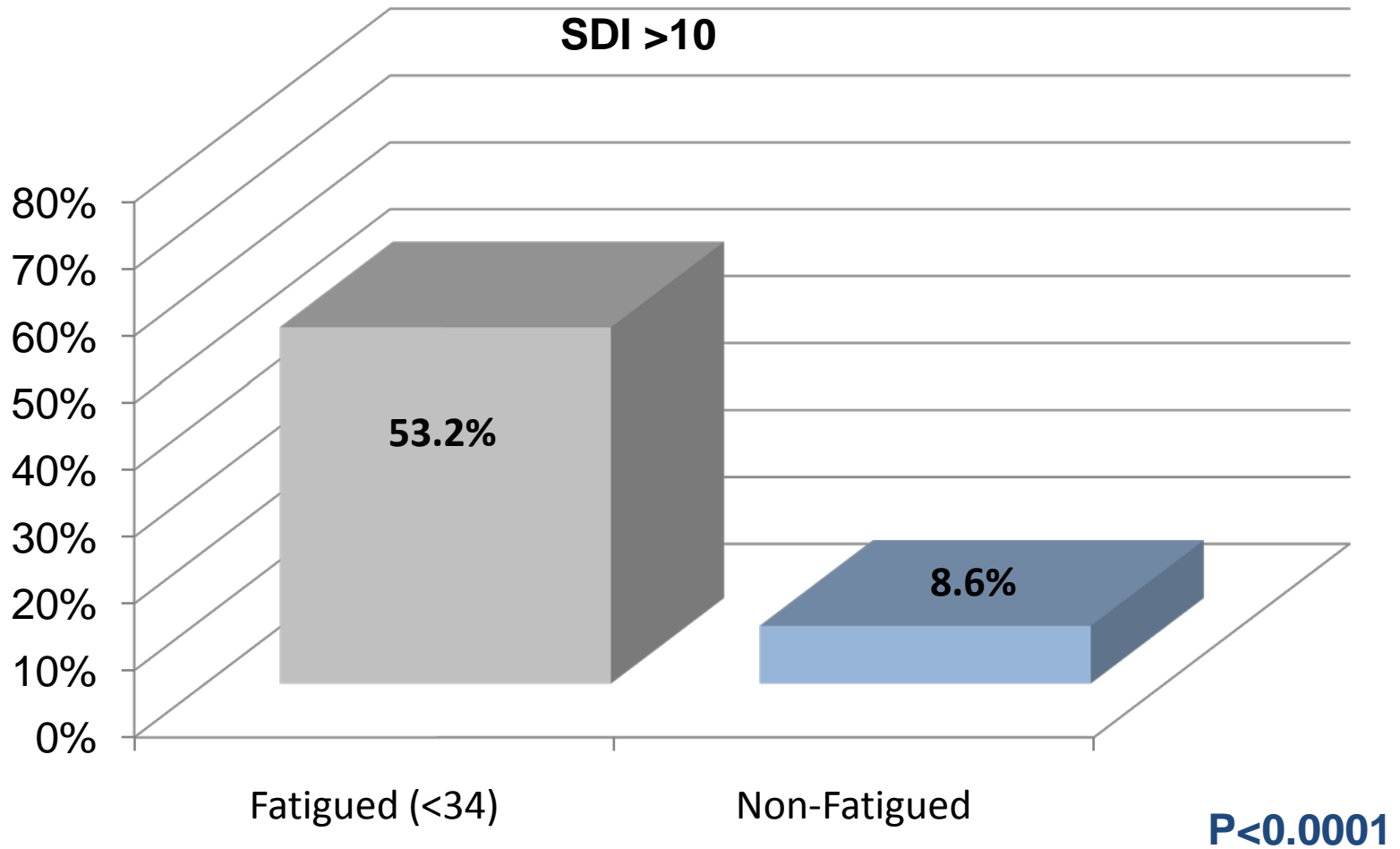


Results

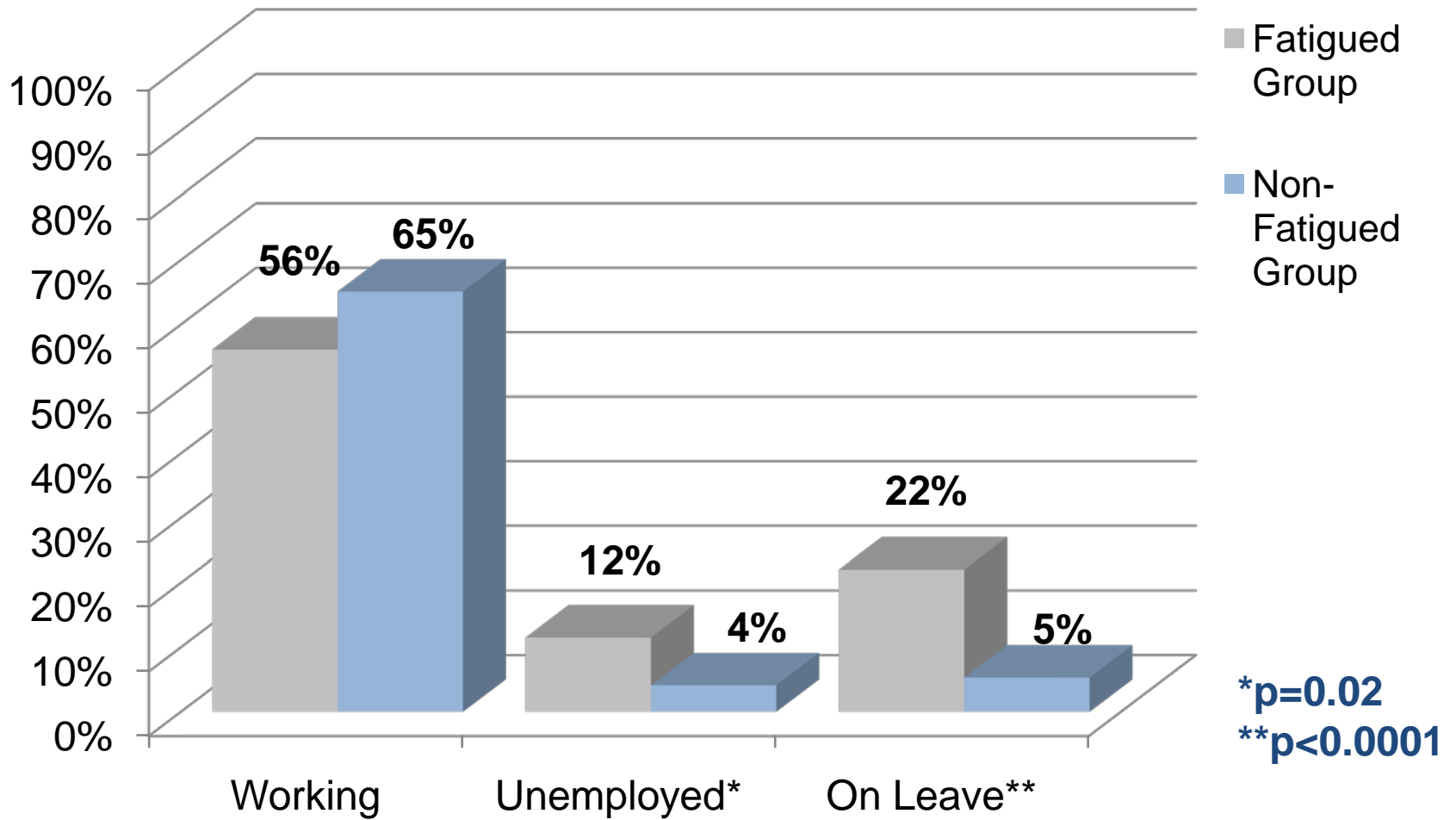
# FACT-F cut-off x Social Difficulties

	Fatigued Mean (+SD)	Non-Fatigued Mean (+SD)	p-value
Everyday Living (range 0-16)	5.2 $\pm$ 3.9	1.0 $\pm$ 1.5	<0.0001
Money Matters (range 0-13)	3.9 $\pm$ 3.9	1.2 $\pm$ 1.8	<0.0001
Self and others (range 0-15)	4.7 $\pm$ 3.5	1.6 $\pm$ 1.9	<0.0001
Total (SDI-16) (range 0-44)	13.8 $\pm$ 9.7	3.8 $\pm$ 3.8	<0.0001

# FACT-F cut-off X SDI cut-off (>10)



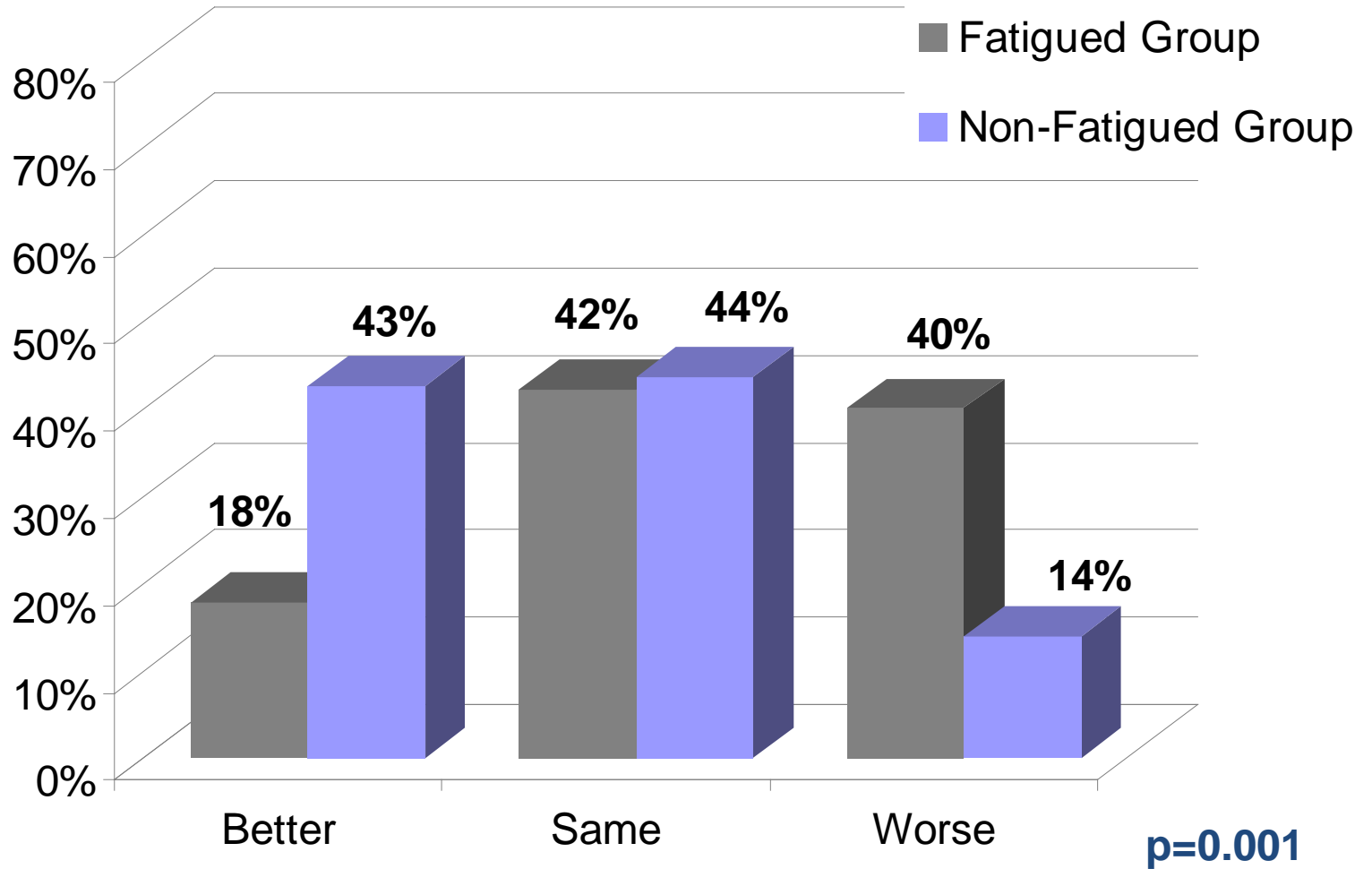
# FACT-F cut-off x Work Status



# FACT-F cut-off x Work Status

	Fatigued Mean ( $\pm$ SD)	Non- Fatigued Mean ( $\pm$ SD)	p-value
<b>Absolute Absenteeism</b> (hrs lost in past month)	16.9 $\pm$ 56.8	-1.5 $\pm$ 33.5	0.04
<b>Absolute Presenteeism</b> (% of the work not undertaken)	28.5 $\pm$ 16.9	16.8 $\pm$ 12.8	<0.0001
<b>Bounded Difference Ratio Presenteeism</b> (% diff in presenteeism between the respondent and other workers) -100 (better) to +100 (worse)	6.0 $\pm$ 15.7	-4.7 $\pm$ 11.8	<0.0001

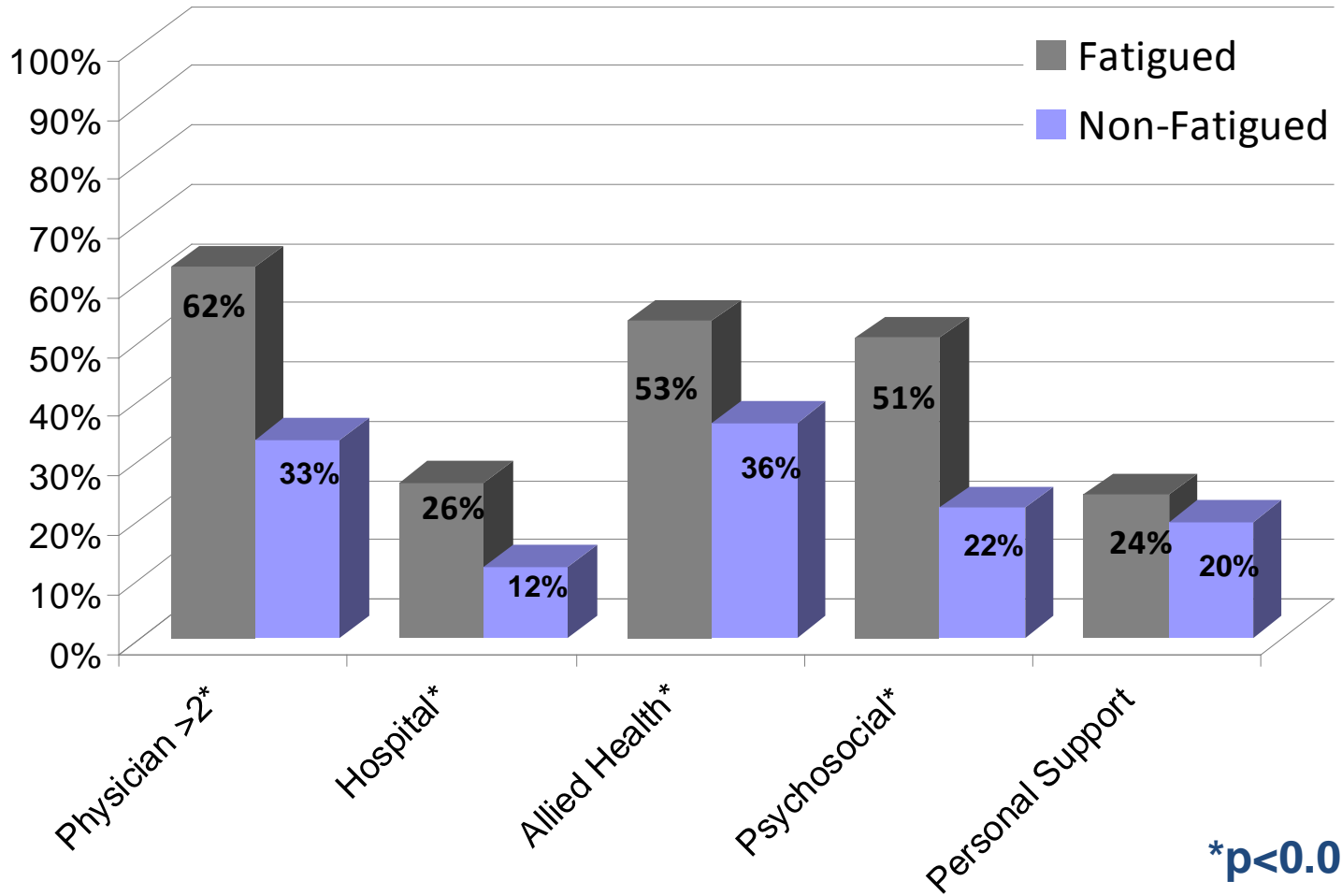
# FACT-F cut-off x Presenteeism



# FACT-F cut-off x Health Care Utilization

Past month (count)	Fatigued Mean (+SD)	Non-Fatigued Mean (+SD)	p-value
<b>Physician Use</b> (GP, oncologist, surgeon, specialist)	2.3 <sub>±</sub> 1.9	1.3 <sub>±</sub> 1.3	<0.0001
<b>Hospital</b> (ER, inpatient, day admission, ambulance)	0.3 <sub>±</sub> 0.9	0.1 <sub>±</sub> 0.4	0.009
<b>Allied Health</b> (nursing, dietician, social work, PT)	1.9 <sub>±</sub> 3.5	0.8 <sub>±</sub> 1.8	0.006
<b>Psychosocial Support</b> (counselling, spiritual support, support group)	1.4 <sub>±</sub> 2.6	0.6 <sub>±</sub> 1.9	0.01
<b>Personal Support</b> (meal delivery, housekeeping)	0.8 <sub>±</sub> 2.6	0.4 <sub>±</sub> 1.1	ns

# FACT-F cut-off x Health Care Utilization



# Summary of Findings

- CRF reported by a substantial minority of BrCa survivors
- BrCa survivors with CRF report:
  - More social difficulties
  - More likely to be unemployed or on leave
  - Miss more work and are less productive at work
  - Use more health care services including physician visits, hospital services, psychosocial and supportive care services, and more allied health visits

# Conclusions

- untreated/undertreated CRF can exact significant personal cost on to BrCa survivors as well as their employers and our health systems
- highlights the urgent need for routine screening and development of effective treatments of CRF
- future interventions for CRF should assess and directly address these issues

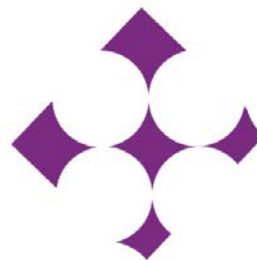


# Questions



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