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Running head: WORKPLACE SUPPORT FOR EMPLOYEES WITH CANCER

Workplace Support for Employees with Cancer

Behdin Nowrouzi

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of Master of Public Health
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ABSTRACT
Workplace Support for Employees with Cancer

PURPOSE: The aim of this study was to survey human resource personnel about how their northeastern Ontario workplaces assist employees with cancer. **METHODS**: This cross-sectional study sent surveys to 255 workplaces in northeastern Ontario with 25 or more employees from December 2007 to April 2008. There were 101 respondents (39.6% response rate). Logistic regression modelling was used to identify factors associated with more or less workplace support. More or less workplace support was defined as those workplaces that provided employees with paid time for medical appointment, *and* offered a return to work meeting *and* reduced hours for employees with cancer. Factors considered in the model included: organizational size, geographic location (e.g., urban or rural) and workplace type (e.g., private versus public sector). **RESULTS:** The majority of participants were female (67.4%) and ranged in age from 25 to 70. Respondents reported working for organizations that ranged in size from 25 to over 9000 employees. In the logistic regression model, large organizational size (OR, 6.97, 95% CI, 1.34 - 36.2) and public sector (e.g., governmental bodies, education boards and non-profit organizations) (OR, 4.98, 95% CI, 1.16 – 21.3) were associated with employer assistance. Public sector employers were 5 times more likely, while organizations with more than 50 employers were almost 7 times more likely to provide employer assistance. The geographic location (i.e., urban or rural workplace) was not associated with employer assistance. **CONCLUSIONS:** This study indicates how employers are assisting employees with cancer in their northeastern Ontario workplaces and provides support to foster supportive professional relationships during a difficult period in a worker's life which necessitates concurrent balance of work life, dealing with a chronic illness, and family responsibilities.

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1.0 INTRODUCTION

1.1 CANCER IN THE WORKPLACE

Cancer has a substantial impact on health status, depression, and overall quality of life (Bodurka-Bevers et al., 2000; Crom, Chathaway, Tolley, Mulhern, & Hudson, 1999; Ganz, Schag, & Heinrich, 1985; Hopwood & Stephens, 2000; Ramsey et al., 2000). As early detection and more effective interventions emerge, the prevalence of cancer survivors continues to increase (Feuerstein, 2005). This means that many cancer patients resume their activities of daily living shortly after treatment. Thus, cancer is not only an issue for the individuals and their families; but it is also an important issue for employers and the workplace (Schultz, Beck, Stava, & Sellin, 2002). Moreover, it is crucial for Canadian workplaces to be aware of health and safety legislation (Lightfoot et al., 2003) and worker's legal rights. Improvements in the treatment of cancer patients and early detection of cancer have resulted in an increasing number of cancer survivors. Therefore, therapeutic approaches have not only increased cancer survivorship; but also peoples' ability to work during and following treatment. However, the impact that both diagnosis and treatment has on cancer survivors' ability to fully engage in paid work is not yet entirely understood (Pryce, Munir, & Haslam, 2007). In 2004, a population-based investigation in the US reported that as compared to healthy controls matched on age, educational attainment and cancer type, survivors had worse outcomes across all measures of burden including work (Yabroff, Lawrence, Clauser, Davis, & Brown, 2004). Since 2000, two review studies of research on the workplace and cancer have been published (Spelten, Sprangers, & Verbeek, 2002; Steiner, Cavender, Main, & Bradley, 2004). The researchers indicated the dearth of evidence on the impact of cancer on workplace outcomes. Furthermore, it is concluded that more research should be conducted to assess the disease, person and work-related factors

and the accompanying relationships that might have an effect on work life and return to work (Taskila & Lindbohm, 2007). Recent interest in the area has produced studies that have focused on examining the impacts of cancer on employment (Spelten, Sprangers, & Verbeek, 2002). Moreover, research is examining the factors that might be associated with employees with cancer's ability to return to work (Spelten, Sprangers, & Verbeek, 2002).

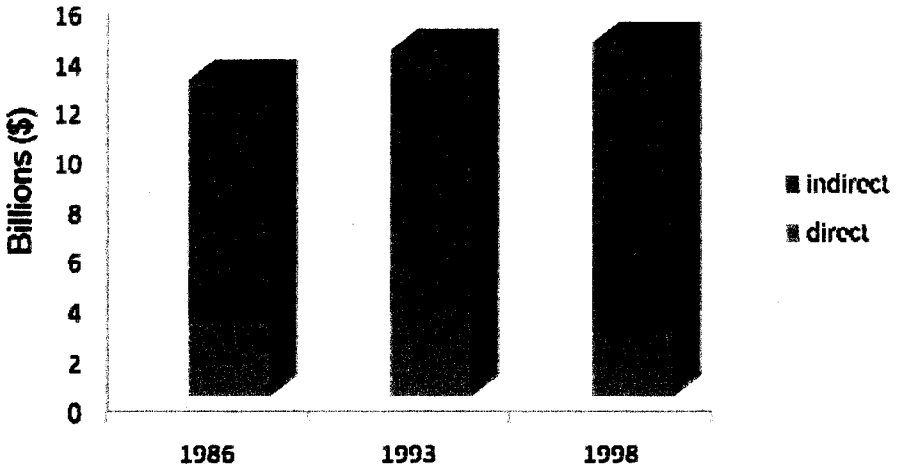
A problem becoming increasingly more apparent in the workplace is cancer (Feuerstein & Harrington, 2006). Currently, there are approximately 3.8 million working aged adults between the ages of 20-64 with cancer in the United States (Institute of Medicine & National Research Counse, 2005). Cancer is a public health concern that will increase over the next 10 years as treatments becoming more successful and as a result of an aging population (Feuerstein & Harrington, 2006). Recent estimates indicate that 8.9 million Americans have a history of cancer. The employment status of cancer patients and survivors has important implications for society and the labour market, for organizations, and for the individuals and their economic, social and psychological health (Institute of Medicine & National Research Counse, 2005). Data suggest that approximately 62 to 84% of cancer survivors return to work following treatment in Canada, with similar patterns found in the United States and Europe (Edwards et al., 2005; Maunsell, Brisson, Dubois, Lauzier, & Fraser, 1999; Short, Vasey, & Tunceli, 2005; van der Wouden et al., 1992). However, despite this growing body of evidence in the area of cancer and work, very little is known about specific psychosocial factors, affective continuance and return to work (Feuerstein, 2005).

1.2 FINANCIAL IMPACT OF CANCER IN THE WORKPLACE

It is estimated that 1 million new cases of cancer are diagnosed in people of working age each year in the United States (American Cancer Association, 2005). Furthermore, cancer accounts for $60.9 billion in direct medical costs and $15.5 billion for indirect morbidity costs (Chang et al., 2004). Cancer has a substantial economic impact in Canada and is measured by direct and indirect costs combined (National Cancer Institute of Canada, 2005). Health care direct costs are attributed to the value of goods and services for which payment was provided. In return, resources are used in rehabilitation, diagnosis, treatment, and delivery of services directly related to illness or injury (National Cancer Institute of Canada, 2005). For instance, direct costs may include care provided in hospitals and other institutions, physician services, drugs and other (e.g., research, capital expenditures, etc.). Indirect costs are the value of economic output lost because of disease, injury related to occupational injury or premature death (National Cancer Institute of Canada, 2005). These can include the value of life lost due to premature death (mortality costs) and potential amount of time lost due to disability (morbidity costs) (Public Health Agency of Canada, 2003; National Cancer Institute of Canada, 2005).

Overall, the total cost of illness in 1998 in Canada was $159 billion, of which $84 billion (53%) were direct costs and $75 billion (47%) indirect costs (See Figure 1) (National Cancer Institute of Canada, 2005).

Figure 1: Financial Burden of disease



In terms of direct costs, hospital care expenditures lead the way followed drug and physician care expenditures (See Figure 2) (National Cancer Institute of Canada, 2005). Just over 50% of hospital care costs were allocated to those 65 years and older. Cancer accounted for 32% of premature mortality costs (See Figure 3), demonstrating that it is the chief cause of premature mortality in Canada (National Cancer Institute of Canada, 2005). In 1998, $14.2 billion (9% of the total cost of illness), was related to cancer, which ranks third in terms of attributable total cost, after cardiovascular (12%) and musculoskeletal (10%) diseases (National Cancer Institute of Canada, 2005). Canadian workers are covered by provincial or federal labour codes, depending on the sector in which they work (Public Health Agency of Canada, 2003). The Canada Labour Code deals with workers covered by federal legislation. This includes those in mining, transportation and federal employment (Government of Canada, 1985). All other workers are covered by the health and safety legislation of the provinces in which they work (Government of Canada, 2007).

Figure 2: Direct Costs related to Cancer (1998)

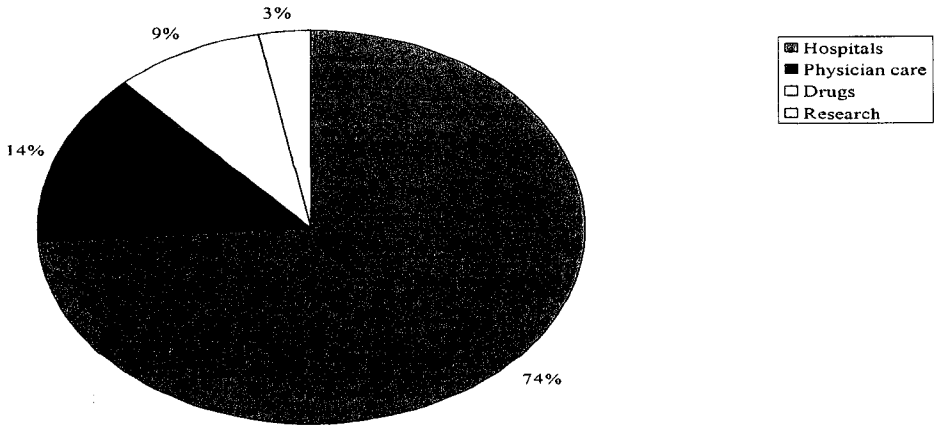
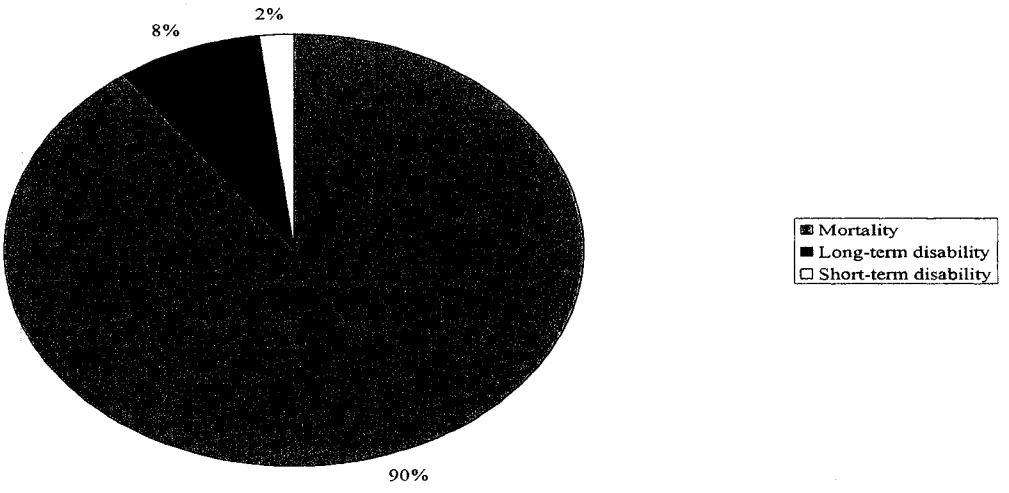


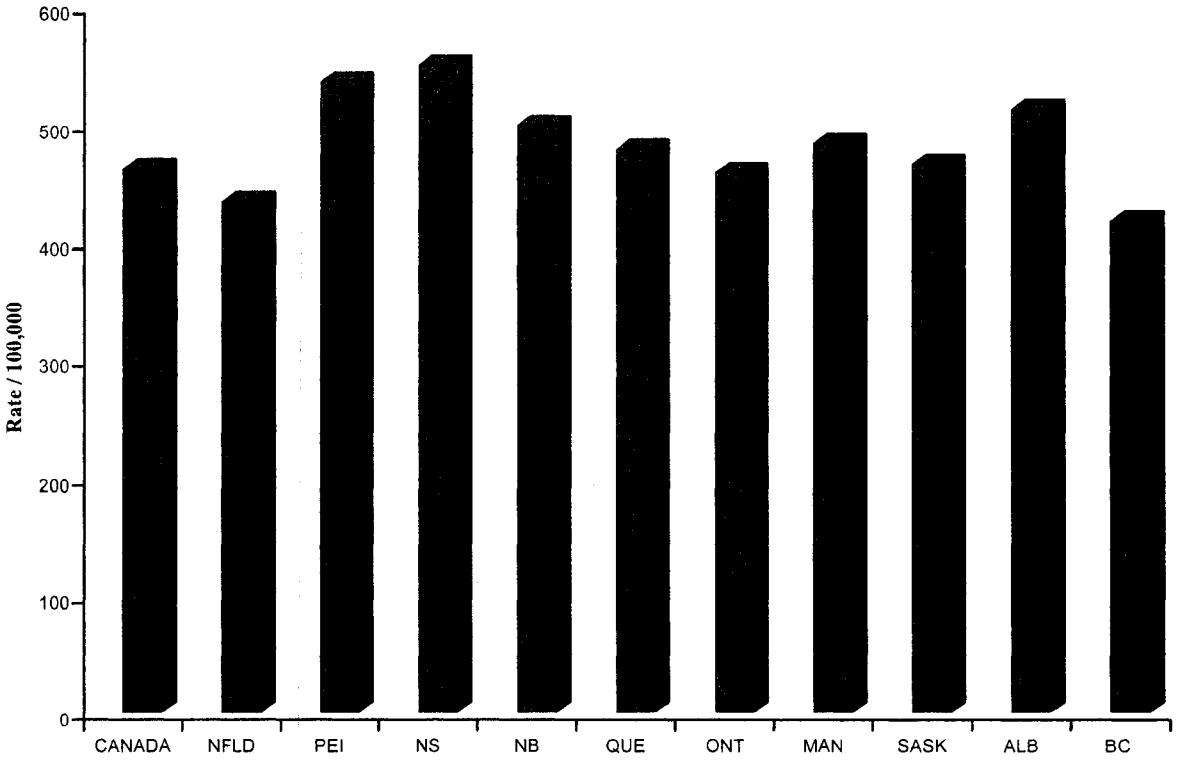
Figure 3: Indirect Costs related to Cancer (1998)



The Canadian Cancer Society (2008a) predicts that over 2,380,000 workers in Canada will get cancer within the next 30 years (Cancer in the Workplace, 2006). It is estimate, 900,000 will not recover (Cancer in the Workplace, 2006). In 2008, the incidence rate of Cancer in Canada for males is estimated to be 462 and 361 for females per 100,000. In Ontario, the

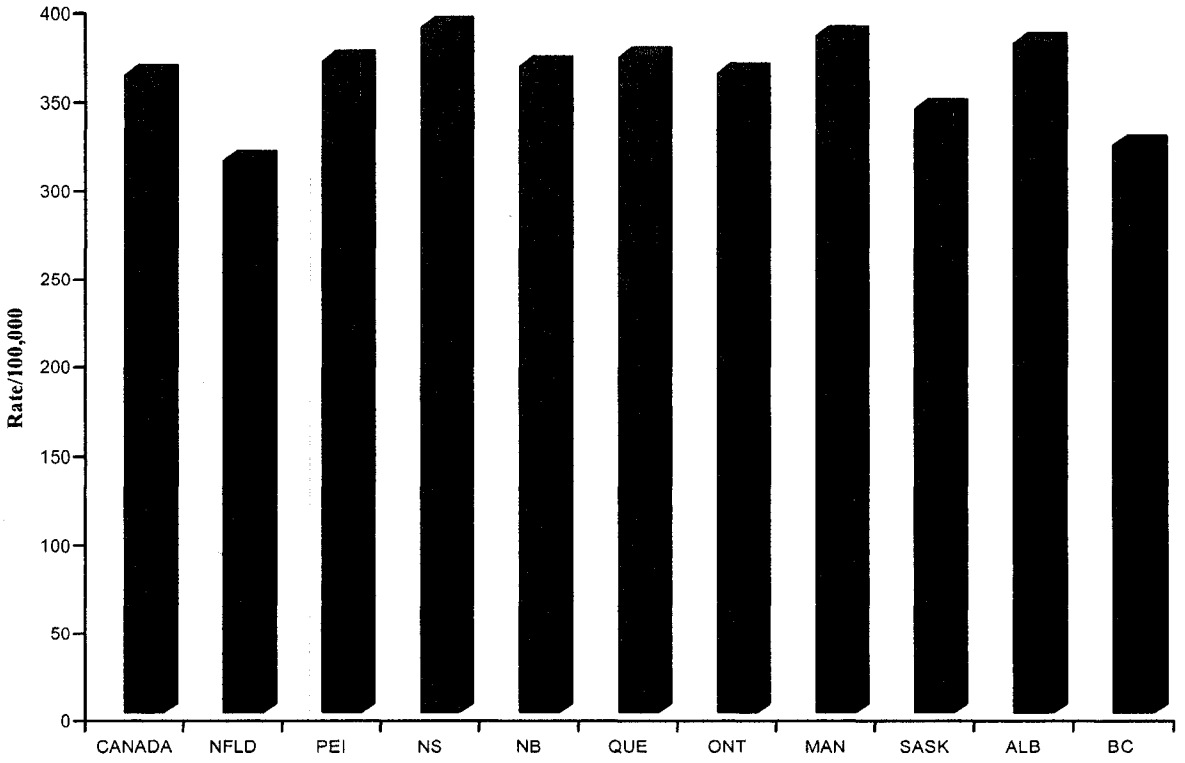
incidence rate for males is 459 and 362 for females per 100,000 (Canadian Cancer Society, 2008b) (See Figure 4 & 5).

Figure 4: Estimated Age-Standardized Incidence Rates for the Most Common Cancers for Males by province (2008)



Source: Adapted from the Canadian Cancer Society, 2008b

Figure 5: Estimated Age-Standardized Incidence Rates for the Most Common Cancers for Females by province (2008)



Source: Adapted from the Canadian Cancer Society, 2008b

In the same year, the Canadian Cancer Society (2008a) predicted an oncoming "cancer crisis," prompted by a cancer rate that is growing twice as fast as the country's population (Cancer in the Workplace, 2006). An estimated 166,440 new cases of cancer and 73,800 deaths will occur in Canada in 2008 (Canadian Cancer Society, 2008a). Furthermore, 1,419 Canadians will die of cancer every week. By 2035, 5.7 million more Canadians will be diagnosed with cancer (Canadian Cancer Society, 2008a). In Ontario, an estimated 27,300 people will die of cancer, and 63,000 new cases will be diagnosed in 2008 (Canadian Cancer Society, 2008a).

Cancer has profound consequences to the Canadian economy. From an employer perspective, it is estimated that cancer will cost the economy over $540 million in lost wages and

12 billion in disability related absences (Hryniuk, 2007). Moreover, employers will incur $962 million in long-term disability claims and $174 million in short-term disability claims over the next 30 years (Hryniuk, 2007). During this time period, the heaviest burden on employers will be the depletion of senior and experienced workers, the cost of retraining and worker absenteeism (Hryniuk, 2007). As scientific advances improve and foster an area where more employees are surviving cancer, the number of individuals who face challenges returning to work will likely increase (Feuerstein & Harrington, 2006; Hryniuk, 2007).

2.0 REVIEW OF LITERATURE

2.1 PUBLIC HEALTH IMPLICATIONS

Pryce and colleagues (2007) argue that there is limited information and research to inform cancer survivors about the possible impact of cancer, its treatment course and long-term side effects on work. Furthermore, there is very little evidence on modified work that can be made available and how these can be accessed by employees; when and how to manage exit from work and return to work; or supporting cancer survivors in managing work relationships (Pryce et al., 2007). Therefore, many people with cancer may experience difficulties and hardships in managing their work if they remain at work throughout treatment or return to work after their treatment (Pryce et al., 2007; Hryniuk, 2007). Cancer can affect many aspects of an individual's life in numerous ways (Batt, 1994). These difficulties include physical changes as a result of cancer treatment, emotional pressures and fatigue associated with cancer and its treatment without adequate work-related support (Bradley & Bednarek, 2002). Cancer has a greater impact on survivors' physical than mental capabilities. Of the 253 long-term survivors in Bradley's study, 18% reported problems completing some physical tasks. The effects of cancer

treatment, especially fatigue, can also impact some survivors' ability to perform mental tasks, such as concentrating for longer periods of time (12%), learning new things (14%), and analyzing data (11%) (Bradley & Bednarek, 2002; Ferrell et al., 1996).

Advances in drug treatment now mean that cancer is shedding its status as a terminal illness and is increasingly perceived as a chronic disease requiring treatment, lifestyle change and monitoring (Bradley & Bednarek, 2002). Recent reports suggest that adult survivorship is on the increase (Bradley & Bednarek, 2002; Spelten, Sprangers, & Verbeek, 2002), most notably within colorectal, prostate, breast and testicular cancer groups. As a result, this means that more people continue to resume their everyday lives during or following treatment. This includes remaining in or returning to employment. The effects of cancer and its treatment are by no means uniform (Edwards et al., 2005; Weir et al., 2003), which makes it difficult to generalize about the impact that cancer and its treatment have on work. However, it is likely that some commonalities may be seen between cancer survivors to help formulate guidance for those working with or returning to work following cancer.

Due to the improved prognosis of many forms of cancer, an increasing number of cancer survivors return to work after their treatment, or continue working during their treatment (Taskila-Brandt et al., 2004). Evidence shows that labour force participation declines 12% immediately following diagnosis to follow up for cancer (Feuerstein & Harrington, 2006). Using the National Health Interview Survey between 1998 and 2000, it was demonstrated that 17% or one out of every six workers with a history of cancer reported that they were unable to work (Feuerstein & Harrington, 2006; Hewitt, Rowland, & Yancik, 2003). These employees attributed this work disability to physical, cognitive or emotional challenges (Hewitt, Rowland, & Yancik, 2003). An additional 7% indicated they were limited in the amount and type of work

they could perform (Hewitt, Rowland, & Yancik, 2003). This burden does not rest entirely on the cancer patient or their family. Interestingly, as with any health problem that impacts work productivity and function, there is a cost to employers. In the United States, these include medical costs, of which a large portion are often covered by the employer, but there are also real costs related to lost productivity, turnover, training, family medical leave and potential effects on coworkers (Feuerstein & Harrington, 2006).

Society continues to perpetuate and exacerbate the view that an individual with cancer is defective or unable to be productive at work (Feuerstein & Harrington, 2006). While at this point, limitations in function often represent sequelae of cancer and its treatment (Feuerstein & Harrington, 2006). Research is required to examine whether cancer survivors perform the essential tasks of their job and if not, can they be reasonably accommodated to minimize the impact of the illness on work productivity (Feuerstein & Harrington, 2006). Yet, employers and supervisors continue to perceive cancer survivors as poor risks for advancement (Messner & Patterson, 2001) and cancer survivors are at high risk for job loss.

2.2 CANCER AND RETURN TO WORK

Work is important for an individual's identity and provides a social connection; it also presents a distraction and enables the person to regain a sense of normality and control (Peteet, 2000). Return to work following critical illness such as cancer is an important area of study for several reasons. Firstly, returning to or maintaining employment after cancer is important for a person's quality of life, including physical and mental health (Anderson & Armstead, 1995; Minister of Supply and Services (Canada), 1994). Earnings from employment are necessary to meet basic needs and facilitate a return to usual life activities (van der Wouden et al., 1992). Moreover, for many women, returning to work after a cancer diagnosis is an important measure

of recovery from and control of the disease and a positive step toward the future (Clark & Landis, 1989; Holland, 1986; Kagawa-Singer, 1993; Mellette, 1985). Secondly, although legislation in Canada (Employment Equity Act, 1995) protects workers against discrimination on the basis of handicap or health state, cancer survivors in these countries have reported experiencing problems in the workplace after returning to work (Maunsell et al., 1999; Feldman, 1986). Problems noted have included hostility, discrimination, decreased wages and difficulty obtaining a new job (Feldman, 1986). Returning to work serves as a measure of recovery from and control over illness, as well as a positive step toward the future (Mellette, 1985; Clark & Landis, 1989; Ferrell, Grant, Funk, Otis-Green, & Garcia, 1997). Work also provides social and financial support (Ferrell, Grant, Funk, Otis-Green, & Garcia, 1997). Cancer patients able to fulfil social and occupational roles while undergoing active cancer treatment consider themselves to be healthy (Kagawa-Singer, 1993).

2.3 CURRENT STATE OF RETURN TO WORK RESEARCH

Previous studies conducted in people treated for various types of cancer have reported a variety of problems at work, including job loss (Mellette, 1985; Feldman, 1989; Leigh, 1994), undesired changes in the work situation (Anderson, 1984; Feldman, 1989; Mellette, 1993; Steele, 1993; Leigh, 1994), problems with co-workers (Anderson, 1984; Mellette, 1985; Feldman, 1989; Brown & Tai-Seale, 1992; Steele, 1993) and diminished work capacity (Clark & Landis, 1989; Feldman, 1989). Research in the area of cancer and work has typically focused on employability statistics, adopting a health economic perspective (Bradley & Bednarek, 2002; Chirikos, Russell-Jacobs, & Jacobsen, 2002).

Currently, the focus has turned towards the employment outcomes of cancer survivors (Short, Vasey, & Tunceli, 2005). Furthermore, they have identified that while one in five cancer survivors reported cancer-related disabilities at follow-up, half continued to work (Short, Vasey, & Tunceli, 2005). The challenges and consequences of cancer and its treatment approaches are likely to impact on an individual's ability to work in many ways. These include physical factors related to the disease such as disfigurement or pain following surgery (Chirikos, Russell-Jacobs, & Jacobsen, 2002; Cella & Tross, 1986), fatigue (Spelten, Sprangers, & Verbeek, 2002) and decreased cognitive functioning (Ahles et al., 2005; Minisini et al., 2004). The Fatigue Coalition (1999) identified fatigue as one of the most important symptoms facing cancer patients today. Another finding of the Fatigue Coalition Study was that of 177 patients surveyed who were working at the time of diagnosis, 75% made changes in their employment status as a result of fatigue, 71% missed one or more days of work per week, 34% decreased their hours or accepted fewer responsibilities, 23% went on disability, and 28% stopped working (Curt, 2000; Carlson, 2001). Other factors also include access to transportation (van der Wouden et al., 1992). Significantly, many of these side effects and consequences of cancer and associated interventions may be more enduring and may last for many years post-treatment. Many of these factors are also seen in other chronic illnesses (Munir, Jones, Leka, & Griffiths, 2005). As a result, there is an opportunity to draw from the wider sphere of rehabilitation to provide support and guidance for cancer survivors (Pryce, Munir, & Haslam, 2007). In addition, these resources should also be extended for health care professionals to assist their patients' return to work.

The majority of studies that address cancer and work outcomes have focused on the likelihood and timeliness of work return (Main, Nowels, Cavender, Etschmaier, & Steiner, 2005). A recent literature review by Spleten et al. (2002) summarized 14 studies and identified

several features of the cancer, the job, and the person that influence work outcomes. In addition, this review also highlighted the methodological and conceptual limitations of this research to date. In particular, the studies examined did not use similar measures of work return, were often methodologically weak, and tended to study highly selected samples of cancer survivors with specific cancer sites (Main, Nowels, Cavender, Etschmaier, & Steiner, 2005).

Employment provides social as well as financial support for cancer patients (Ferrell, Grant, Funk, Otis-Green, & Garcia, 1997). Indeed, an individual's concept of self is partly derived from work, and considerable personal satisfaction is obtained through achievements, recognition and social interactions that take place at work (Clark & Landis, 1989). The positive attitude of co-workers and discretion over work hours or amount of work was positively associated with return to work. Most work-related factors, however, were negatively associated with return to work, such as manual labor and work posing physical demands. Cancer patients who are able to fill financial, social and occupational roles while undergoing therapy consider themselves to be healthier because of their work (Kagawa-Singer, 1993).

Previous studies have shown that the ability of cancer survivors to continue their employment appears optimistic with employer support in the workplace (Baanders, Andries, Rijken, & Dekker, 2001). Research conducted using telephone interviews of women with breast cancer revealed 80% returned to work during a period of 18 months after cancer diagnosis (Bouknight, Bradley, & Luo, 2006). Slightly more survivors were not working three years after diagnosis compared with women never diagnosed with cancer (Steiner, Cavender, Main, & Bradley, 2004). However, in a mail survey about the effect of the illness on their vocational status, answered by 378 women who had survived breast cancer without recurrence for at least two years, over 40% stated that cancer had altered their priorities or progress at work (Stewart et

al., 2001). Though several studies have been conducted about the importance and need for social support of cancer patients, it has only been recently that research has pointed out its significance.

2.4 EMPLOYER'S ROLE

Cancer patients face a variety of challenges related to employment (Hewitt, Greenfield & Stovall, 2006). While workplace attitudes have changed towards employees with cancer, one factor has remained constant over the past 25 years: employees with cancer want to, and are able to, perform their work duties and return to work after cancer diagnosis (Hoffman, 2005). Cancer treatment does, however, limit the ability of a minority of survivors to work as they did before diagnosis (Short & Vargo, 2006). Chronic illness in the workplace raises complicated issues for employers, including right to privacy, concern of fellow workers, accommodation and productivity. Research has shown that employer-made work adjustments that directly accommodate barriers of workers enable them to better cope and manage their work and also maintain employment (Pryce et al., 2007. Evidence demonstrates that job adjustments are essential in enhancing the employment prospects of the chronically ill (Andries et al., 1997; Roessler R.T. & Rumrill P.D., 1998). There is, however, little insight into the extent to which the experiences of specific problems at work are related to work adjustments. Employers must strike a balance in supporting the employee, sustaining business objectives and managing costs. These goals necessitate a framework for addressing the sensitive workplace issues that arise when an employee has a serious illness (International Foundation of Employee Benefit Plans, 2005). Evidence has suggested that workplace accommodations by employers play a significant role in cancer patient's return to work (Bouknight, Bradley, & Luo, 2006).

Over the last two decades, the workplace has become an increasingly important site for distributing health information. In addition, the workplace is important in establishing activities to promote health, including those directed at the prevention and early detection of cancer (Bagai et al., 2007). Workplaces offer access to large numbers of people in Canada or 17,100,000 people (Statistics, Canada, 2008). In the United States, the staggering costs of medical illness have prompted many companies to initiate workplace cancer-screening programs to avoid or reduce these expenditures (Ziegler, 1998). Other benefits of offering these programs in the workplace include improved employee health, increased productivity, improved employee morale, and a convenient setting for screening and education (Haynes, Odenkirchen, & Heimendinger, 1990; CDC, 1997). Moreover, the workplace is an effective channel for creating behavioral change and modifying environmental factors – partially because it offers access to a potentially captive audience – particularly for cancer-prevention activities because many cancers are related to lifestyle, and therefore potentially preventable factors (Doll & Peto, 1981).

In 2005, the United Kingdom charity Cancer BacupUK (formely BACUP) conducted a survey of how cancer affects working lives. Founded in 1985, BACUP (British Association of Cancer United Patients - and their families and friends), provides a national cancer information service for patients, their relatives, doctors and other health professionals (Clement-Jones, 1985). The paper questionnaire was randomly distributed to 1200 users on Cancer BacupUK telephone support line users between August 2004 and January 2005. The sample may only represent those users that use the charity's resources and services. Moreover, it was also made available online with a return rate of 27% (210 paper and 118 online). The majority of respondents were women (77%) while the age range of the entire sample was between 18 and 68, with a median age of 50

(Cancer BacupUK, 2005). Men were underrepresented in this survey and their concerns and needs regarding cancer workplace supports may be not be represented in the study findings.

The survey reported that many employees leave the workforce not because of the severity of their cancer, but because there is a crucial lack of practical policies, information and support (Cancer BacupUK, 2005). As well, it was easier to access human resources or occupational health services and support in larger organizations as opposed to smaller ones. In addition, 49% of large organization offered alternative working arrangements compared to 39% of medium-sized organizations and 29% of small organizations. Cancer patients who were not offered information about dealing and managing work issues related to their illness were four times more likely to report that their working lives had deteriorated because of their cancer (Cancer BacupUK, 2005). This indicates that cancer patients require more support from both employers and the medical profession in terms of work-related advice, information and adjustment. Very little evidence strictly examines the adaptations in the workplace or content of work that could ease the returning process for cancer survivors (Steiner, Cavender, Main, & Bradley, 2004).

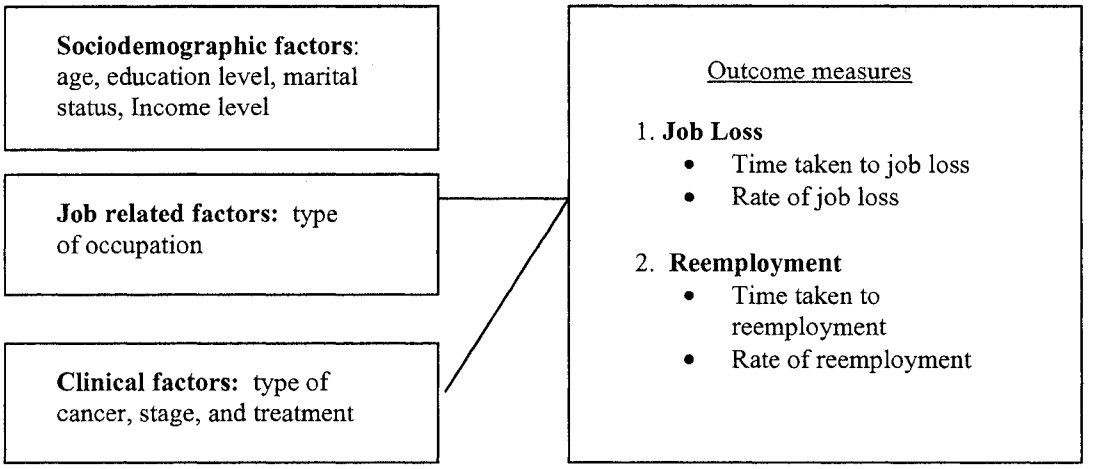
Whether a survivor continues to work during treatment or returns to work after treatment, (assuming that survivor's diagnosis or treatment will result in working limitations), depends on many factors (Hoffman, 2005). They include: the survivor's age, stage at diagnosis, financial status, education, and access to health insurance and transportation, as well as the physical demands of the job and the presence of any other chronic health conditions (Bradley & Bednarek, 2002; Short, Vasey, & Tunceli, 2005; Steiner, Cavender, Main, & Bradley, 2004; Barofsky, 1989). For instance, workers in physically demanding jobs have higher disability rates than those in more sedentary jobs; survivors with advanced education have had higher return to work rates than those with less education. Cancer patients diagnosed with advanced disease are

more likely to experience problems returning to work than those diagnosed with localized disease (Feldman, 1978;, Ganz, Coscarelli & Heinrich, 1989; Cookfaire, Mettlin Cummings, Lane, 1983). Those working in blue-collar occupations and low-income or seasonal jobs also experienced employment difficulties (Satariano & DeLorenze, 1996). One study indicated that, support staff and clerical employees were off-work approximately 60 days longer than management employees (Watson, 1990). According to Mor (1986) and Hoffman (2005), a higher percentage of white collar workers (78%) than blue collar workers (63%) remained in their jobs 12 months post diagnosis. This suggests that workers were not able to return to physically demanding jobs as quickly as to occupations characterized by less physical exertion and more flexible schedules (Satariano & DeLorenze, 1996).

Due to the improved prognosis of many forms of cancer, an increasing number of cancer patients return to work after their treatment, or continue to work during their treatment (See Figure 6) (Taskila-Brandt et al., 2004). Cancer patients may have a difficult and capricious course and experience numerous disruptions in their lives (Berkman & Sampson, 1993). Concurrently with the significant financial burden of treatment, cancer can become overwhelming (Choi et al., 2007). Moreover, regardless of socioeconomic status, many employees with cancer and their families that are confronted with cancer, and its treatment costs, have financial problems (Berkman & Sampson, 1993). In a Korean prospective cohort study, cancer patients report a variety of employment problems including job loss, undesired changes in their job responsibilities, and diminished work capacity, which worsens their economic burden (Choi et al., 2007). A problem becoming more evident in the workplace is cancer (Choi et al., 2007). Two systematic reviews have been published in the past seven years on cancer and return to work (Spelten, Sprangers, & Verbeek, 2002; Steiner, Cavender, Main, & Bradley, 2004). The

lack of research on the impact of cancer on work outcomes demonstrates that more research should be conducted to assess the disease-related, work-related, and person-related factors that might have an effect on work life and return to work (Taskila & Lindbohm, 2007).

Figure 6: Model of the Impact of Sociodemographic, Job-Related, and Clinical Factors on the Job Loss and Reemployment in Cancer Patients



Source: Adapted from Choi, K. S., Kim, E. J., Lim, J. H., Kim, S. G., Lim, M. K., Park, J. G., et al. (2007). Job loss and reemployment after a cancer diagnosis in Koreans - a prospective cohort study. *Psychooncology, 16*(3), 205-213.

3.0 OVERVIEW OF STUDY AND OBJECTIVE

Cancer impacts and places major social, economic and psychological burden on individuals and their relationships (personal and professional). Research indicates that there is very little evidence examining how employers assist employees with cancer. This cross-sectional study utilized a questionnaire to examine how organizations help employers with cancer with the goal to increase the understanding of the experiences of employees with cancer in the workplace. Ultimately, the results will help shape and develop a more detailed understanding of the factors that actually predict return to work. This research study will increase the knowledge base in this important but under-researched area.

Currently, it is not fully understood how cancer patients perceive their ability to work or the adjustments that are required to facilitate work during, and following, treatment. Studies that have attempted to address these concerns continue to be hampered by small sample sizes and a lack of control for cancer site, and in-depth studies have been largely restricted to case study and qualitative research (Edwards et al., 2005). Serious illness in the workplace raises complicated issues for employers, including right to privacy, concern of fellow workers, accommodation and productivity. As the number of cancer survivors increases, empirical data on their work experience is growing. Quantitative studies using questionnaires have suggested that a change of job or employer, early retirement, unemployment, and lowered income are common among cancer patients (van der Wouden et al., 1992; Abrahamsen, Loge, Hannisdal, Holte, & Kvaloy, 1998). Qualitative studies have indicated that women with breast cancer returning to work reported experiencing physical fatigue, demotion, conflict with employers and co-workers and personal changes and attitude towards work job and unwanted job responsibilities (Maunsell et al., 1999; Salander, Bergenheim, & Henriksson, 2000). There is little information about the

employment changes of cancer patients and the factors that relate to these changes (Choi et al., 2007). Although there have been studies conducted regarding cancer patient's social support using mostly qualitative studies, the importance of support from the work life is unclear.

3.1 OBJECTIVE

The purpose of this study is to survey human resource personnel regarding how they assist employees with cancer in workplaces with at least 25 employees in northeastern Ontario.

4.0 METHODS

4.1 OVERVIEW

The methodology of this cross-sectional research study employed a self-administered questionnaire. The survey was mailed to participants. The survey consists of a series of written questions requesting a participant's responses. Participants for this study included Human Resources personnel at various organizations in northeastern Ontario with twenty-five or more employees. Since the various businesses are located across a large geographic area in Ontario, a self-administered questionnaire was deemed appropriate. Furthermore, this approach permitted participants flexibility to complete the questionnaire at their own leisure either on paper or online. Face-to face interviews would have been too time consuming, costly (e.g., travel expenses, accommodations, etc.) and impractical. Similarly, telephone interviews were not feasible because they would take too long to administer and would have excessive cost (i.e., long distance charges). Moreover, phone calls may have inconvenienced the human resources professionals during a time when they are preoccupied with work duties.

Questionnaires offer an objective means of collecting information about people's knowledge, beliefs, attitudes, and behaviour (Oppenheim, 1992; Sapsford, 2006). The questionnaires were mailed (with stamped envelopes for reply) and returns collected and entered in an electronic database setup to store the confidential data. As completed questionnaires were returned, they were assigned an identification number (alphanumeric and in serial order). A graph was used to monitor the return rate for both paper and online versions of the questionnaire (See Figures 7 & 8). The day when questions were mailed out is labelled "Day 1" on the graph, and every day thereafter, the number of returned questionnaires were tabulated graphically (Babbie, 2006). Questionnaires were collected from December 2007 to April 2008. This record

keeping provided a guide to how the data collection was proceeding. Further, this approach was helpful for sending reminder letters and any supplemental mailing of survey packages.

4.2 PARTICIPANTS

The research design employed a non-experimental, cross-sectional survey design. Human resources personnel in workplaces with at least 25 employees in northeastern Ontario were invited to participate in this study. A total of 255 paper questionnaires sent to human resource personnel Ontario businesses listed in the Canadian Business Directory. In total, 255 were invited to participate and 101 responded (39.6% response rate).

4.3 INSTRUMENTATION

The four-page questionnaire included specific questions directly related to issues pertaining to how employers assist employees with cancer, including questions dealing with views on their organization's structure and information about respondents' demographic information were developed (Appendix A). The questionnaire was based on the existing questionnaires in the literature (Pryce, Munir, & Haslam, 2007) and from human resources' surveys (Cancerbackup, 2005; Morell & Pryce, 2005). In addition, two of the co-investigators (Rhonda Watson, CHRP and Kristy Gervais) for this project with human resources backgrounds helped to tailor the questions towards a human resources audience.

The 28 item questionnaire included five sections: i) Demographics (e.g., including age, gender, years of human resource experience and the size of the organization); ii) Organizational specific information (e.g., type of workplace, whether they currently have or have had employees with cancer, and if their organization had a specific cancer policy); iii) Types of accommodations provided to employees with cancer (e.g., whether employers provided leave

absence, flexible schedules, etc. – please see questionnaire for complete list); iv) Resources provided to employees (e.g., paid time off to attend medical appointments, external counselling, supplemental insurance, whether they offered a return to work meeting or other services or information about managing work-related issues associated with their illness) and; v) Tracking of the number of employees with cancer, (e.g., whether those with cancer return to work and any specific resources or services offered to minority groups). Open-text boxes for five of the questions also invited respondents to note any further information of interest relating to their experience related to employees with cancer. Qualitative analysis of these comments is found in the result section.

4.4 DATA COLLECTION

An online version of the questionnaire was also made available. Participants were mailed a package containing a cover letter (Appendix B) and an informed consent (Appendix C) form explaining the study and the questionnaire. In the cover letter, respondents were informed that completion of the survey indicated their consent to participate, that participation was voluntary, and results would be reported in aggregate format. The consent and informed consent forms were also made available online along with the questionnaire. Two weeks after the initial mailing, participants who had not responded and completed the survey were mailed a reminder letter (Appendix D) stating that the survey was still available if they wished to participate in the study.

4.5 MEASURES

A. *Employer assistance*

For the purpose of this study, employer assistance was defined as paid time for medical appointment, *and* offer of return to work meeting *and* reduced hours to employees with cancer. Evidence has shown that paid time for medical appointment is associated with return to work for employees with cancer (Pryce et al., 2007). Return to work meeting showed significance (p=0.006) in Fisher's exact two-tailed test analysis. Reduced number of hours was selected in part due to its significance but also because it garnered a large enough sample to permit logistic regression analysis.

B. ***Number of employees in organization***

The number of employees at an organization as reported by respondents. This variable was partitioned into two categories: 25-49 employees & 50 or more employees. The data was divided this way because it allowed for half the sample to be represented in each category.

C. ***Urban or rural centre***

The communities of northeastern Ontario were separated into urban and rural categories. Urban was defined as a centre with 10,000 or more people (Statistics Canada, 2001; Pong & Pitblado, 2006). Rural was defined as a center with less than 10,000 people (Statistics Canada, 2001; Pong & Pitblado, 2006). Populations for the northeastern communities were obtained from Statistics Canada community profiles (2006).

D. ***Private and Public sectors***

Employers were separated into public and private sector categories based on participant responses. The private sector included: manufacturing, insurance and retail businesses. Public employers included: governmental bodies, education boards and non-profit organizations.

E. *Types of accommodations*

The classification of *job sharing* included allowing job duties and responsibilities of employee with cancer to be shared or divided while *reduction in hours worked* encapsulated a reduction in the number of hours worked by employee with cancer. *Telecommuting* was classified as working from home and is part of teleworking (home and regional centers are the two main types of *telecommuting*). *Additional breaks or rest periods* was defined as employees being provided with additional breaks as needed in addition to those normally scheduled during a typical work period); *adjustments in the physical environment* was identified as employer supported modifications to the physical setting of employee workplace such as ergonomic office assessment, job site analysis); Other accommodations were *paid time for medical appointments* and offer of a *return to work meeting* (e.g., organized meeting with return to work representative, employer and employee with cancer).

F. *Employer's perspective*

Employees' work responsibilities was characterized as the opinion of respondent regarding whether employees with cancer can fulfill their work responsibilities and deal with their illness at the same time. *Tracking of employees with cancer* was defined as whether or not an organization officially tracks the number of employees with cancer or those that return to work after treatment.

4.6 ETHICS

To ensure that informed consent has been received from each participant, the recruitment package included: a cover letter and informed consent form explaining the study, the process involved and what was expected of respondents. Moreover, those who completed the survey

online typed their names (following webpage after reading the informed consent form) as their signature.

A. STUDY APPROVAL

This study was approved by Lakehead University's Ethics Committee (See appendix E).

4.7 STATISTICAL ANALYZES

Analyzes of the dataset variables were performed using the chi-square test/and or Fisher's exact two-tailed test for the respective variables. Statistical Package for the Social Sciences (SPSS) version 15.0 was used for the data analyzes (SPSS, 2007).

A. Data Checks

Once data were collected and entered in SPSS, several data validation checks were performed on all variables to identify any outliers, missing data values, suspicious entries as well as to perform logical consistency checks.

B. Descriptive Statistics

Demographic and summary measures were calculated for all variables of particular interest in this thesis (e.g., percentages, frequencies, and cross-tabulations).

C. Inferential statistics

Logistic regression analysis was used to measure the association between employer assistance and predictor variables (e.g., Number of employees in organization, Private and Public sectors, Urban or rural centre); the probability level (p) of less than 0.05 was used as the criterion of significance. Fisher's exact two-tailed test was used to investigate the relationship between types of accommodation and workplace size and sector (e.g., public versus private).

5.0 RESULTS

5.1 CHARACTERISTICS OF THE STUDY POPULATION

Descriptive and univariable analyzes were conducted to describe the characteristics of the participants. A total of 41 paper questionnaires were returned and a further 60 were completed online (n=101) (39.6% response rate). The majority of participants were female (67.4%) and the respondents ranged from 25 to 70 years in age (Mean= 45.30, S.D. = 8.10). Respondents worked for organizations that ranged in size from 25 to over 9000 employees. The human resources directors had on average 11 years of experience (Mean=11.31, S.D=8.31). In terms of type of workplace, 65.3% of respondents (n=101) worked in manufacturing, while 11.9 % worked in other areas of the private sector. Conversely, 15.8% worked in the public sector and 6.93% were classified in their workplace as 'other'. Details about respondent's characteristics can be seen in Table 1. Furthermore, these characteristics were selected because of there importance in describing the population of human resources and to increase the understanding of how employers assist employees with cancer.

Table 1
Demographics of participants (%)

	Total (n=92)	*Male (n=30)*	*Female (n=62)*
Age			
Under 35	9.8	10.0	9.7
36-45 years	37.0	16.7	46.8
46-55 years	33.7	46.7	27.4
56 years or above	19.6	26.7	16.1
Years of experience in Human Resources			
10 years or less	54.3	46.7	58.1
11 to 20 years	30.4	26.7	32.3
Greater than 20 years	15.2	26.6	9.7
Size of Workforce			
25to 50 employees	50.0	60.0	45.2
51 of more employees	50.0	40.0	54.8
Type of Workplace			
Manufacturing (e.g., automobile, steel)	64.1	76.7	58.1
Private Sector (e.g. Information technology, retail)	12.0	10.0	12.9
Public Sector (e.g. government, education)	15.2	6.7	19.4
Non-profit organization (e.g. YMCA, Salvation army)	2.2	0	3.2
Other	6.5	6.7	6.5

Note. N=92 due to missing values.

5.2 RETURN RATE MONITORING

After a month following the initial mailing, on a weekly basis two telephone calls were made to those organizations that had not responded to the survey. Furthermore, following the telephone calls, four rounds of e-mail reminders were made on a weekly basis. The email correspondence stated the purpose of the study and a reminder that the survey was still available. Each participant completing the questionnaire online was assigned a unique identifier to prevent duplicate entries.

Figure 7: Return Rate for Paper Questionnaire (n=41)

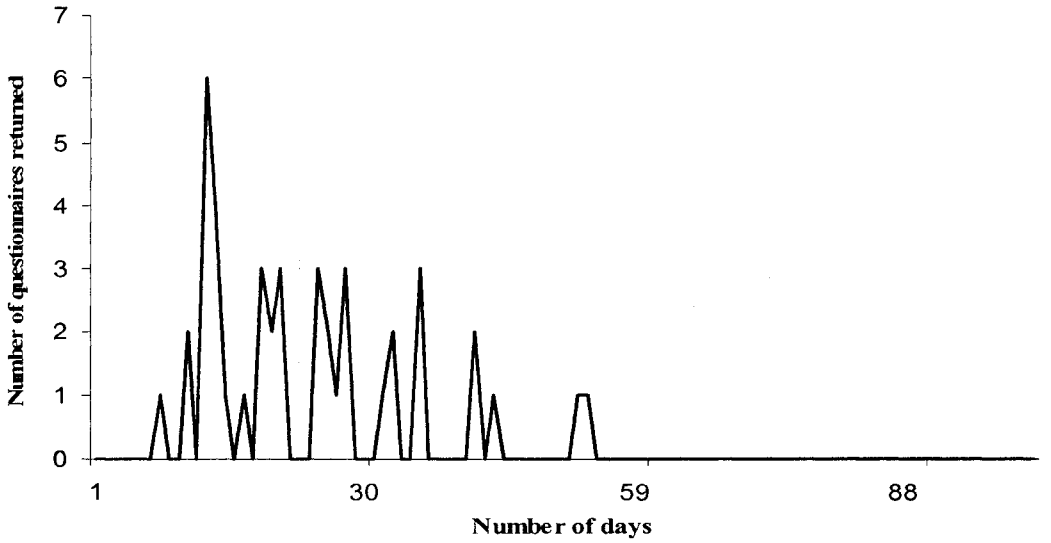
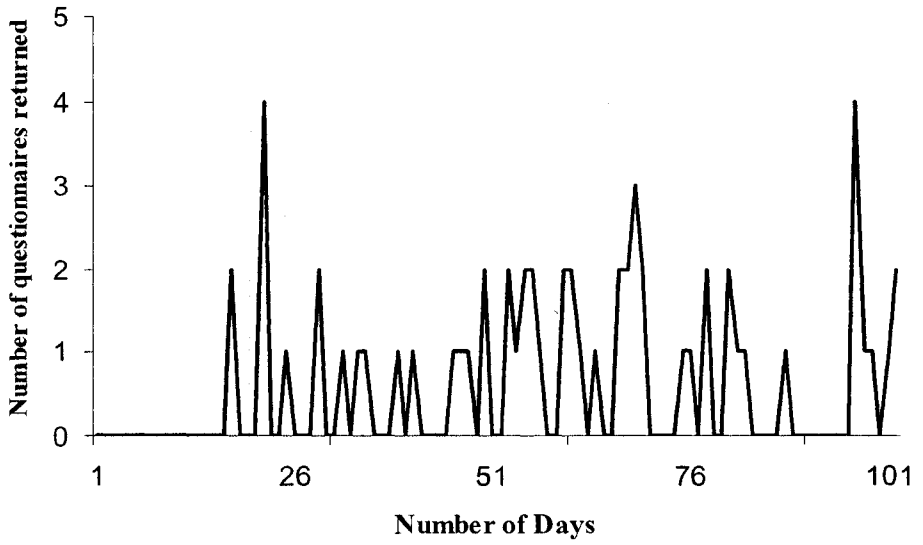


Figure 8: Return Rate for Online Questionnaire (n=60)



5.3 CANCER POLICY

The majority of the respondents (78.8%) stated that their organization did not have a policy specifically for cancer, while 14.1% of organizations included cancer as part of their

critical illness policy, 3% were currently developing a cancer policy and 5% did not know. No respondents stated that they had a specific cancer policy at their workplace.

5.4 EMPLOYEES WORK RESPONSIBILITIES

Almost half of employers (47.5%) did not believe that employees would be able to fulfill their work responsibilities and deal with their illness at the same time. Approximately, 12.1% responded that they could not concurrently manage their cancer and work duties, while 40.4% answered that they did not know.

5.5 TRACKING OF EMPLOYEES WITH CANCER

Few respondents (9.90%) stated that they kept official track of employees with cancer, while the majority (79.2%) did not keep track, and 10.9% did not know whether their organization monitored workers with cancer. In addition, 10.0% of employers tracked the number of employees that returned to work following cancer treatment. 79.0% of employers did not keep records and 11.0% did not know.

5.6 TYPES OF ACCOMMODATIONS

Fisher's exact two-tailed test analysis demonstrated a statistically significant association between type of workplace and several organizational resources offered to employees with cancer (See Table 2). For instance, public sector employers were more likely to use paid time for medical appointments, (n=93, p = 0.008). Respondents from the private sector (including manufacturing) were less likely to offer different types of accommodations. Analyzes conducted of other accommodations (e.g., job sharing, reduction in hours worked, telecommuting, additional breaks or rest period, adjustments in the physical environment,

employees' work responsibilities, tracking of employees with cancer) by workplace type or organizational size showed no statistical significance (not shown).

Table 2

Organizational practices (%) across private and public sector related to employees with cancer

	Private Sector	Public Sector
Return to Work Meeting** (n=92)		
Yes	34.6	85.7
No	65.4	14.3
Paid Time for Medical Appointments (*n*=93)*		
Yes	45.6	85.7
No	54.4	14.3
Job Sharing (*n*=92)*		
Yes	26.9	42.9
No	73.1	57.1
Telecommuting (*n*=93)*		
Yes	3.8	21.4
No	96.2	78.6

Note. *p<0.05. **p<0.01.

Fisher's exact two-tailed test analysis showed a statistically significant association between the size of an organization and several organization resources offered to employees with cancer. For instance, public sector employers were more likely to offer a return to work meeting, (n=93, p = 0.006).

Table 3
Corporate practices (%) based on organizational size related to employees with cancer

	Organizations with 25-50 Employees	Organizations with 51 or Employees
Return to Work Meeting (n=97)		
Yes	31.2	49.0
No	68.8	51.0
Paid time for Medical Appointments (n=99)		
Yes	60.0	67.3
No	40.0	32.7
Reduction in Work Hours (n=100)		
Yes	29.4	55.1
No	70.6	44.9
Additional Breaks during Work (n=100)		
Yes	76.5	46.9
No	23.5	53.1
Adjustments to Physical Environment (n=100)		
Yes	9.8	26.5
No	90.2	73.5

Note. $p<0.05$.

5.7 FACTORS RELATING TO HOW EMPLOYERS ASSIST EMPLOYEES WITH CANCER

The factors associated with employers' assistance with cancer were calculated using univariate and multivariate logistic regression analyzes (See Table 4). The predictor variables placed in the model included: the number of employees in an organization, whether it was located in an urban or rural centre setting and whether it belonged to the private or public sector.

When paid time for medical appointments, reduction in work hours and providing a return to work meeting were considered, employers with more than 50 workers (OR = 6.97, 95% CI= 1.34 - 36.2) and whether they belonged to the private and public sector were significant (OR = 4.98, 95% CI=1.16 – 21.3).

Table 4
Adjusted odds Ratio estimates and approximate 95% for employer assistance of employees with cancer (n=100).

Characteristics	Adjusted Odds Ratio	95% CI
Number of Employees*	6.97	1.34-36.21
Private versus Public sector*	4.98	1.16-21.3
Urban versus Rural	5.05	0.91-28.00

Note. *p<0.05. Overall logistic regression based on all predictor variables.

5.8 QUALITATIVE DATA

The questionnaire permitted respondents to provide qualitative comments. As a whole, 81.1% of respondents provided at least one comment. In terms of short-term disability, 16% respondents wrote that they offered some sort of short term disability package to employees. Of these participants, 38.9% answered that they provided short-term disability ranging from 17 weeks to 52 weeks in length. Others provided the number of hours workers were eligible to receive short term disability or the amount of weeks available to different types of staff (i.e., unionized staff, management, etc.). Approximately, 12% stated that an employee's ability to deal with both issues was an individual issue: "It depends on the individual, the type of cancer, how they deal with [the] diagnosis, the treatments received...some individuals are able to continue functioning normally". Conversely, 3% of respondents stated that they followed the guideline of the treating physician, took time off work or were able to work and receive cancer treatment. Respondents stated (17%) that they provided external counselling services including psychotherapy through employee benefit plans or packages.

5.9 MISSING VALUES

Missing datum was not a significant concern in this research study. Of the variables in the analysis, only gender and sex had greater than 4% of missing data at 9 and 14 percent respectively. 'Return to Work Meeting' was missing or determined to be unknown for 4% (n=97), while both variables 'Job sharing' and 'Paid time for medical appointments' had 2% of missing data (n=99). Telecommuting had 1% missing data (n=100). 'Private and Public sectors', 'Urban or rural centre' and 'Number of employees in organization' had no missing data.

6.0 DISCUSSION

6.1 OVERVIEW

The purpose of this study was to increase understanding of how employers assist employees with cancer. A questionnaire was developed to further the understanding in this under researched and important area of study. The ramifications of cancer are not just confined to the workplace but widespread, impacting both personal and professional relationships (Hoffman, 2005). In this study, employer sponsored and supported resources and accommodations included paid time off to attend medical appointments, reduced and a return to work meeting.

At 39.6%, the response rate was lower than expected given the systematic follow-up procedures that were used (reminder letter, phone calls and email). This response rate was comparable to employee survey of factors related to return to work by Pryce et al., 2007. More responses were provided online because the questionnaire was readily available to late responders or those who no longer had a paper copy. Response rates are likely more dependent on the population sampled than on any other factor (Sax L. J, Gilmartin S. K, & Bryant A. N, 2003). Standardized questionnaires delivered online and on paper have offered mixed results (Vallejo, Mañanes, Isabel Comeche, & Díaz, 2008). However, considering that the study offered participants no remuneration, it becomes highly challenging to obtain a higher response rate. Moreover, the human resources professionals may have been preoccupied with work responsibilities to participate in the study. Comparing the respondents to those that did not participate in this study, similar proportions of respondents from public and private sector organizations were found with non-respondents. For instance, the study's sample had 79.2% of respondents identified as belonging to the private sector and 13.9% belonging to the public

sector. In the non-responder population, 78.4% were in the private sector and 19.1% in the public sector. Furthermore, the median employee size of an organization for respondents was similar to that of non-respondents at 50.0 and 47.5 employees respectively. However, the mean organization size was larger for non-respondents than respondents (165.0 and 95.7). These findings suggest that this sample is an appropriate representation of the total sample of organizations in northeeastern Ontario. Research has shown that a low response rate alone do not necessarily indicate a bias when participants characteristics are representative of nonrespondents, low return rates are not biasing (Krosnick, 1999; Dillman 1991).

The low response rate may suggest that a qualitative approach with an emphasis on focus groups and key informant interviews may be beneficial in identifying themes important to how employers help their employees. This study used a quantitative approach to ultimately describe how employers on a large scale are offering assistance to their workers with cancer. Almost half the employers did not believe that employees could manage their work responsibilities simultaneously with their illness. Some employers may perceive that their limitations are more significant than they are in reality, others may perceive that they can work harder than they can in reality. Nearly half of employers (47.5%) believed that employees with cancer could fulfill simultaneously their work obligations and their illness. Some employers may view workers limitations as more significant than actually presented. Conversely, other employers may minimize the impact of an employee's illness and have higher expectations. This can have a potentially serious impact on the individual's work performance and professional relationship not only with the employer but with coworkers. It is important that workers with cancer and their employers are aware of the impact on the employee due to the symptoms of cancer and its treatment and discuss the changes to their work and job requirements as a result.

Currently, identifying risk factors related to return to work after cancer is poorly understood and requires further research into the dynamics of the workplace (Pyrce et al., 2007). This under investigation is exacerbated by this study's finding that only 9% of employers' officially tracked the number of employees with cancer and 10% monitored those returning to work after cancer treatment. Evidently, greater emphasis on identifying the number of employees with cancer will not only illustrate the current demand but also provide evidence for the allocation of services and resources.

In examining the practices of organizations that offered accommodations to employees with cancer (those reported to be significant), a greater proportion of public employers offered assistance. Paid time for medical appointments finding concurs with the Pryce et al., 2007 study that it is a significant factor in predicting return to work after cancer. In terms of organizational size, organizations with greater than 50 employees provided more assistance to certain areas (e.g., return to work meeting, paid time for medical appointments, and reduction in work hours) compared to smaller businesses. This may not be surprising given that larger employers have greater access to financial and other types of resources. While it is encouraging that employers are offering resources and assistances to their employees, a greater emphasis should be placed on identifying the services that are requested or essential to employees with cancer. This is challenged by the individualistic nature of the illness (e.g., no two people are alike and neither are their cancer outcomes) and its consequences for both employer and employees.

Interestingly, this study found that nearly 4 out of 5 businesses did not have a policy to assist workers with cancer. A specific policy can identify and ultimately augment the relationship of work with cancer. Moreover, such a policy provides the framework that many stakeholders can use in effectively collaborating on work together. For instance, employers can

use such a policy with the employees' health care profession to implement a strategic and timely return to work plan. As a result, the employee is provided with a purpose and financial stability to resume their life while the employer saves money by avoiding rehiring and retraining costs.

6.2 LIMITATIONS AND POTENTIAL BIASES

A. Representativeness of Respondents for Selection Bias

This research has some limitations. Firstly, the representativeness of cases in this study is of potential concern. The sample population was confined to northeastern Ontario. Therefore, the results cannot be generalized for other parts of Ontario. Secondly, participants were selected from the Canadian Business Directory. Not all northeastern Ontario businesses are listed in the directory. Furthermore, 15 study packages were returned because they were undeliverable (e.g., not having the business's current address). Those that returned the questionnaire may be more motivated, interested or inclined to help with the study than non-respondents. Women were the majority of respondents (67.4%) and this may suggest that men are less likely to return questionnaires. However, 75% of human resource specialists are female and this sample may be an adequate representation of this group (Government of Canada, 2008). Older participants represented a greater proportion in this sample (19.6%) than in the larger group of human resource specialists as reported by Service Canada. This could indicate that an important group of people is being under-represented (e.g., younger respondents) and another over-represented (older respondents). Finally, the study surveyed organizations with 25 or more employees, thus excluding the responses of smaller organizations.

B. Group Size and Power

This study was hampered by a small sample size. Thus, it may result in the study having insufficient power to determine how employers assist employees with cancer. As well, different statistical tests have varying sensitivity to detect differences based on sample size. For instance, there was a wide confident interval in the logistic regression model and Fisher's exact two-tailed test was used for the small cell counts in the cross tabulation analysis.

C. Reliability of Measures and Procedures

As stated in the methods section, the questionnaire was developed with the assistance of two human resource professionals (also co-investigators) who helped in tailoring the questions towards a human resources audience. However, since there is no questionnaire targeted towards this population, unreliable operationalizations of constructs determined in the development of the questionnaire to measure how employers assist employees with cancer, may invalidate some of the findings of the study. Acknowledging that this is a descriptive study, further research could validate and expand these findings.

D. Recall Bias

The role of how employers assist employees with cancer is of great interest; however one limitation is assessing this relationship. A concern is that employers may not accurately recall the number of employees with cancer, especially if the organization did not keep official track of these numbers.

E. External Validity

The sample population is a representative of human resources professionals in northeastern Ontario. It is likely that they have specialized training, certification and are

members of professional associations in human resources. The views of the human resources directors may not be representative of human resources professionals elsewhere across the region, province, country or internationally. This may be due to the varying workplace cultural practices of human resources professionals across regions and in part to different jurisdiction regulations and laws. Therefore, the generalizability of this study is limited to human resources professions in northeastern Ontario.

6.3 FUTURE STUDIES

The interrelated nature of the cancer-related factors and their impact on return to work makes it challenging to identify potential relationships with the outcome measure (Spelten, Sprangers, & Verbeek, 2002). Numerous studies have shown that cancer survivors have a lower probability of being employed than their cancer-free population (Hoffman, 2005; Mor, 1986). Pryce et al., (2007) suggests further research is examining and understanding the psychosocial predictors related to work. It is plausible that some of these factors may be related to how employers offer assistance during this tumultuous period in the employee's personal and professional life. It would be beneficial to understand the relationship between employer support and return to work and its impact on workload, support for colleagues of employees with cancer and productivity. Qualitative studies could also be used to identify themes through narratives and focus groups within the organization at different corporate levels. Conversely, further quantitative studies can validate this study's result can target human resource professionals in other jurisdictions and/or use a larger sample size. A mixed methods approach may be beneficial in combining a survey sent to employers and holding interviews.

Workers exist within production units of businesses and sectors (public or private) that are found in different geographic regions. Given the hierarchical nature of businesses, future research may use a hierarchical approach may be used to further examine the views of both employers and employees within an organization from a particular region (Todd, Crook, Barilla, 2005). Hierarchical linear modelling has been used in public health, psychology and education to tackle some common problems associated with multilevel data, thus advancing the understanding of the dynamic inner workings of organizations (Todd, Crook, Barilla, 2005). Independent of the methodological approach used, researchers should focus on the interaction between the many factors involved in the return to work process. Investigators should examine the importance of workplace supports for cancer survivors and those dealing with their illness while working.

6.4 IMPLICATIONS

Too few employers are providing sufficient support and information to employees affected by cancer. This study showed that only a small proportion of employers have either a specific policy on managing cancer in the workplace or a generic policy on critical illness. Policies are not a universal solution to this complex problem. However, they can set out clearly for employers and employees at all levels the resources and support available within an organization, as well as helping to ensure that individuals affected by the illness are managed in a consistent manner. As well, employers should officially track the number of employees with cancer to be able to deliver services in a timely and appropriate manner and gauge the demand for these services in the workplace.

As several respondents stated, cancer in the workplace is a sensitive, personal and individualized issue for employees. Furthermore, its implications are widespread and often

involve employers, colleagues, co-workers, and personal relationships with family and friends. During a period of great uncertainty, change and conflicting emotional approachs to an issue that is not standard, employers can provide assistance to a wealth of resources and become a beacon of stability to employees with cancer. Concurrently, employers are in an ideal position to facilitate flexibility and understanding to employees' apprehensions or concerns regarding their ability to return to work as decrease in wages can pose a significant financial burden. Equally important is the implementation of cancer policy that is relevant and available to employees. From this study, this appears to be an area where organizations may need to invest more resources.

7.0 CONCLUSION

This study highlights the importance of cancer management for employers and their employees. Additional research may indicate that when work adjustments are tailored to meet the needs of those with cancer, employees with cancer are most likely to continue working or return to work. This research has the potential to offer important information to four different groups. First, clinicians from primary to tertiary care may be able to use the results of this study to enhance the level of care they provide to their patients. Furthermore, they may use the findings to develop better relationships that foster timely communication with the employee's workplace. Research has shown that the greater level of involvement of health care professionals in the return to work process, the sooner is the likelihood that the employee returns to work. Secondly, this is a novel and under investigated research topic that deserves increased attention from researchers. This is especially relevant when considering the pervasiveness of cancer in Canadian society. Some research has emerged from the United States and United Kingdom but there is very little in the Canadian literature regarding this topic.

Thirdly, for human resources professionals and employers, this research may help in raising some of the issues that are important to them when dealing with an employee with cancer. Finally, although not directly involved in the study, it is believed employees will have a greater understanding of the employer's role in the process and the factors that impact their chances to resume their occupation. This understanding may be part of future research that enables a deeper level of collaboration between all stakeholders.

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APPENDIX A – QUESTIONNAIRE

Workplace support for employees with cancer

Available online: **http://survey.behdin.com/index.php?sid=1**

All Questions contained in this questionnaire are strictly confidential

DATE SURVEY COMPLETED: _____
MM/DD/YYYY

1) Time spent in a human resources position with this organization (years): _____

2) Approximately how many people does your organization currently employ? _____

3) In your opinion, your workplace would be classified as:

- ☐ Manufacturing (e.g., automobile, steel)
- ☐ Public Sector (e.g., government, education)
- ☐ Private Sector (e.g., Information technology, retail)
- ☐ Non-profit organization (e.g., YMCA, Salvation Army)
- ☐ Other, please specify: _____

4) Has your organization ever had an employee(s) with cancer?

- ☐ Yes
- ☐ No
- ☐ Don't know

5) Does your organization offer a compressed work schedule, so that employees with serious illness such as cancer can work more hours per day, but fewer days per week (e.g., four 10-hour days per week)?

- ☐ Yes
- ☐ No

6) Please indicate the type of accommodations your organization provides to an employee with a serious illness such as cancer. (*Please check all that apply*)

- ☐ Leave of absence
- ☐ Periodic time off
- ☐ Flexible schedule
- ☐ Reduction in hours worked
- ☐ Additional breaks or rest periods
- ☐ Job sharing
- ☐ Prioritization of work
- ☐ Adjustment in workload, current position (e.g., reduced workload, modified duties)
- ☐ Transfer to another mutually agreed upon position
- ☐ Telecommuting (e.g., work from home) or other alternative work arrangements
- ☐ Adjustments in the physical environment (e.g., ergonomic office assessment)
- ☐ Other, please specify: _____
- ☐ None

7) Does your organization provide contact information about support services and resources for employees with cancer?

- ☐ Yes
- ☐ No - *If you answered No, please go to question 9.*

8) What types of support service information are provided by your organization to employees affected by cancer? (*Please check all that apply*)

- ☐ Company benefits
- ☐ Sick leave and sick pay
- ☐ Flexible work or work adjustment
- ☐ Return to work policies (e.g., Job site visit, Graduated Return to Work etc.)
- ☐ How to talk about their situation to colleagues
- ☐ Sources of information and assistance (e.g., charities, cancer society)
- ☐ Other, please specify: _____

9) Are you aware of a policy in your workplace for assisting employees affected by cancer?

- ☐ Yes, a policy exists specifically for cancer
- ☐ Yes, a policy exists as part of our critical illness policy
- ☐ No, but we are currently developing such a policy
- ☐ No, and no such policy is under development
- ☐ Don't know

10) When did your organization last review its policy for managing employees affected by cancer?

11) Does your organization offer paid time off to attend medical appointments?

- ☐ Yes
- ☐ No

12) Does your organization provide an extended benefits plan that includes sick days?

- ☐ Yes
- ☐ No

13) Does your organization provide an extended benefits plan that includes short-term disability?

- ☐ Yes
- ☐ No

If you answered "yes", please describe time limits and other support(s).

14) Does your organization pay for external counselling services (e.g.. grief counseling, supportive psychotherapy for employees, health workplace programs)?

☐ Yes
☐ No

If you answered "yes", please specify the specific type of counselling services covered.

15) Does your organization offer private health insurance (e.g., Group Health Insurance)?

☐ Yes
☐ No

16) Does your organization offer a return to work meeting with the employer for an employee with cancer when the employee has experienced long periods off work (e.g., following cancer treatment)?

☐ Yes
☐ No

17) Please indicate any other policies or services your organization has offered to support employees with cancer.

18) Does your organization currently have the following policies, or offer the following services, to employees with cancer? (*Please check all that apply*)

☐ Information about managing work-related issues associated with the employee's cancer
☐ Support in managing work issues associated with the employee's cancer
☐ Provide accommodations for the spouse of the ill employee
☐ Other, please specify: _____
☐ No, the organization has no such policies or services.

19) Do you believe it is the employer's responsibility to offer opportunities for staff to support co-workers with serious illness?

☐ Yes
☐ No - *If you answered 'No', skip to question 21.*

20) Does your organization currently provide any of the following opportunities for staff to support co-workers with a serious illness? (*Please check all that apply*)

☐ Providing personal assistance to employee (e.g., transportation to the physician's office)
☐ Fund raising campaigns on behalf of employee, either directly to the employee or a non-profit organization

☐ Donation of vacation days to a bank or pool

☐ Donation of sick days to a bank or pool
☐ Other, please specify: _____

21) Does your organization offer critical illness insurance as a voluntary benefit?

☐ Yes
☐ No

22) Do you feel employees with cancer are unable to fulfill their work responsibilities and deal with their illness at the same time?

☐ Yes
☐ No
☐ Don't know

Would you like to comment further to question 22?

23) Does your organization officially keep track of the number of employees with cancer?

☐ Yes
☐ No
☐ Don't know

24) Does your organization officially keep track of whether people who have/have had cancer return to work after treatment?

☐ Yes
☐ No
☐ Don't know

25) Does your organization routinely provide any special paid services or benefits to employees with cancer (e.g., massage therapy, rehabilitation services)?

☐ Yes
☐ No

26) Does your organization provide culturally sensitive support for minority groups with cancer?

☐ Yes
☐ No

27) What is your current age (years)? _____

28) Are you Male or Female ?

☐ Male
☐ Female

Thank you for your time!

APPENDIX B – COVER LETTER

Appendix B
Cover Letter

Dear (name of participant),

Study Title:
Workplace support for employees with cancer

Principal Investigator:
Nancy Lightfoot, Ph.D., Northern Ontario School of Medicine

Co-investigators:
Rhonda Watson, CHRP, Sudbury Regional Hospital, Kristy Gervais, M.A., Northern Ontario School of Medicine

Student Investigators:
Behdin Nowrouzi, Lakehead University

You are being invited to participate in a study of workplace support for employees with cancer in Northeastern Ontario. To help you make an informed decision about whether to participate, this letter explains what the study is about, possible risks and benefits, and your rights as a participant. If you do not understand something, please ask for an explanation.

STUDY PURPOSE
The study is being led by researchers at Lakehead University, the Northern Ontario School of Medicine, and the Sudbury Regional Hospital. The purpose of this study is to better understand what services are available to employees with cancer. To do this, human resources personnel in workplaces in Northeastern Ontario with at least five employees are being asked to complete a survey about how their workplace supports employees with cancer.

Participating human resources personnel will complete a brief survey about their organization's role and policies regarding the return to work for employees with cancer. The survey may be completed using a paper-based form (to be mailed to Behdin Nowrouzi when completed) or online at http://survey.behdin.com/index.php?sid=1. All information, including the online responses for the questionnaire will be anonymous and kept confidential. Participants will be assigned identification numbers that will be kept in a separate online database and will only be used for the purposes of preventing duplicate survey entries. All information obtained in the study will be used for research purposes only. The survey has 30 questions and will take approximately 20 minutes of your time. Once the study is complete, the research findings will be used to produce a report available to the public, and can be sent to your organization (if desired). Anonymized group information obtained from this study will be published and will form the basis of a thesis for a student (Behdin Nowrouzi) in the Master of Public Health program at Lakehead University.

RISKS
Participation in this study poses no known or anticipated risks to you. You may choose not to answer any questions that make you feel uncomfortable.

BENEFITS
Participation in this study will provide valuable information on what support workplaces in northeastern Ontario are providing employees with cancer. The results of this study will identify factors that may influence work of employees with cancer.

CONFIDENTIALITY
After the survey is complete, nothing will be retained that could allow anyone to identify you or your workplace in the information or in the results. The surveys will not have your name on them, nor the name of your workplace. If the results of the study are published or presented at a scientific meeting, you will not be identified. All individual information will be kept confidential and will not be made available to the public. The surveys will be kept in a locked cabinet behind a locked door at the Centre for Addiction and Mental Health, and stored with personal identifiers removed.

COMPENSATION
You will not be paid for participating in this study. There are no costs to you for participating in this study, and your participation is entirely voluntary.

QUESTIONS
For any questions about your role in this study, please contact Behdin Nowrouzi, MSc (OT), OT Reg. (Ont.) at (416) 655-1723 or bnowrouz@lakeheadu.ca. You may also contact Dr. Nancy Lightfoot, Division Head, Human Sciences Division, Northern Ontario School of Medicine, at nancy.lightfoot@normed.ca.

STUDY WITHDRAWAL
You may refuse to participate in or withdraw from the study at anytime. Your work within your organization will not be altered or affected in any way by your decision to participate or not, or withdrawal from this study.

STUDY APPROVAL
This study has been reviewed by, and has received ethics clearance through the Office of Research Ethics at Lakehead University. If you have any comments or concerns about this study, you may contact the Office of Research Ethics, at (807) 343-8283.

Sincerely Yours,

Behdin Nowrouzi
MPH graduate student
Lakehead University

Rhonda Watson, CHRP
Director, Human Resources
Sudbury Regional Hospital.

Nancy Lightfoot, Ph.D.
Division Head, Human Sciences Division,
Northern Ontario School of Medicine

Kristy Gervais, M.A.
Membership Director, Board of Directors
Sudbury Human Resources Professionals Association
Northern Ontario School of Medicine

APPENDIX C – INFORMED CONSENT

Appendix C
Informed Consent Form

Research Project Title: Workplace support for employees with cancer

Researchers: Behdin Nowrouzi, Lakehead University. Nancy Lightfoot, Ph.D., Northern Ontario School of Medicine, Rhonda Watson, CHRP, Sudbury Regional Hospital, Kristy Gervais, M.A., Northern Ontario School of Medicine

This consent form is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

I, _____, understand that researchers at Lakehead University and the Northern Ontario School of Medicine are conducting a study to better understand what services are available to employees with cancer. To do this, human resources personnel in workplaces in Northeastern Ontario with at least five employees are being asked to complete a survey about how their workplace supports employees with cancer.

Participating human resources personnel will complete a brief survey about their organization's role and policies regarding the return to work for employees with cancer. The survey may be completed using a paper-based form (to be mailed to Behdin Nowrouzi when completed) or online at http://survey.behdin.com/index.php?sid=1. All information, including the online responses for the questionnaire will be anonymous and kept confidential. Participants will be assigned identification numbers that will be kept in a separate online database and will only be used for the purposes of preventing duplicate survey entries. All information obtained in the study will be used for research purposes only. The survey has 30 questions and will take approximately 20 minutes of your time. Once the study is complete, the research findings will be used to produce a report available to the public, and can be sent to your organization (if desired). Anonymized group information obtained from this study will be published and will form the basis of a thesis for a student (Behdin Nowrouzi) in the Master of Public Health program at Lakehead University.

The completed questionnaires will be securely stored according Lakehead University policy for seven years. No information will be released or printed that would disclose any personal identity, or that of my employer.

I acknowledge that the research procedures described above have been explained to me and that any questions that I have asked have been answered to my satisfaction. I have been assured that no information will be released or printed that would disclose my identity, or that of my employer's and that my responses will be completely confidential. Any risks or benefits that might arise out of my participation have also been explained to my satisfaction.

I understand that my participation is completely voluntary and that my decision either to participate or not to participate will be kept completely confidential. I further understand that I

can withdraw from the study at any time without explanation. I acknowledge I have been given a copy of this consent form.

I, _____, hereby consent to participate in this study.

Date: _____
Participant's Signature_____

For further information, please contact:
Behdin Nowrouzi
Master of Public Health Student
Lakehead University
E-mail: bnowrouz@lakeheadu.ca
Tel: 416-655-1723

APPENDIX D – REMINDER LETTER

Lakehead
UNIVERSITY

Master of Public Health (MPH)

Dear Director of Human Resources,

Recently we wrote and invited you to participate in a research study entitled "Workplace support for employees with cancer". This collaborative study between Lakehead University, the Northern Ontario School of Medicine and Sudbury Regional Hospital is looking at how employers assist employees with cancer in the workplace.

We ask you to take a few moments and complete this survey and help us better understand what services are available to employees with cancer.

To participate, please click on the link below. If you have any comments or questions, please do not hesitate to contact Behdin Nowrouzi by email bnowrouz@lakeheadu.ca or by phone at 416-655-1723.

With very many thanks,

Behdin Nowrouzi
MPH graduate student
Lakehead University

Rhonda Watson, CHRP
Director, Human Resources
Sudbury Regional Hospital.

Nancy Lightfoot, Ph.D.
Division Head, Human Sciences Division,
Northern Ontario School of Medicine

Kristy Gervais, M.A.
Membership Director, Board of Directors
Sudbury Human Resources Professionals Association
Northern Ontario School of Medicine

APPENDIX E – ETHICS APPROVAL LETTER

Lakehead
UNIVERSITY

Office of Research

Tel (807) 343-8283
Fax (807) 346-7749

December 7, 2007

Behdin Nowrouzi, Nancy Lightfoot, Rhonda Watson, Kristy Gervais
c/o Masters of Public Health Program
Lakehead University
955 Oliver Road
Thunder Bay, Ontario P7B 5E1

Dear Researchers:

Re: REB Project #: 034 07-08
Granting Agency name: N/A
Granting Agency Project #: N/A

On the recommendation of the Research Ethics Board, I am pleased to grant ethical approval to your research project entitled, "Workplace support for employees with cancer".

Ethics approval is valid until **December 7, 2008**. Please submit a Request for Renewal form to the Office of Research by November 7, 2008 if your research involving human subjects will continue for longer than one year. A Final Report must be submitted promptly upon completion of the project. Research Ethics Board forms are available at:

http://bolt.lakeheadu.ca/~researchwww/internalforms.html

During the course of the study, any modifications to the protocol or forms must not be initiated without prior written approval from the REB. You must promptly notify the REB of any adverse events that may occur.

Completed reports and correspondence may be directed to:

Research Ethics Board
c/o Office of Research
Lakehead University
955 Oliver Road
Thunder Bay, ON P7B 5E1
Fax: (807) 346-7749

Best wishes for a successful research project.

Sincerely,

Dr. Richard Maundrell
Chair, Research Ethics Board

/len

cc: Dr. Nancy Lightfoot, Supervisor, NOSM-East Campus
Faculty of Graduate Studies
Office of Research