

**EXPLORING THE DIETARY CHOICES OF CHINESE WOMEN LIVING WITH
BREAST CANCER IN METRO VANCOUVER**

by

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Abstract

Breast cancer is the most frequently diagnosed cancer in Canadian women, including women from immigrant groups. Many women with breast cancer believe that diet is responsible for their cancer and recurrence. Several ethnic groups have culturally distinctive views on food and its consumption, including the Chinese who constitute the largest visible minority population in Metro Vancouver. Studies have shown that Chinese breast cancer patients in other countries integrate their cultural beliefs about diet and traditional Chinese medicine to prevent cancer recurrence and promote health. However, limited studies have been performed to understand the dietary choices and information needs of Chinese breast cancer patients in British Columbia (B.C.). Currently there are few culturally specific resources despite the large immigrant population in the province.

In this qualitative study, purposive sampling was used to recruit 19 first- and second-generation Chinese Canadian women aged 41-73 years in Vancouver, who have been diagnosed with breast cancer within the last five years. Interviews were recorded and transcribed verbatim. Data were analyzed using qualitative data analysis software and manual coding. Themes were developed using interpretive description methodology, an inductive approach to understanding clinical phenomena and generate implications for clinical practice. A follow-up focus group was held with participants to validate the emergent themes and enhance rigour.

Five main themes were generated; (i) dietary change process, (ii) goals of dietary change, (iii) dietary beliefs and uncertainties, (iv) barriers and facilitators to dietary change and (v) information and resource needs. Participants implemented dietary changes to various degrees and the majority reduced consumption of meat. Many expressed fear and uncertainties over the effects of some foods after diagnosis. Barriers and facilitators to dietary change were family preference, convenience, taste and cost. The main sources of diet related information were family, friends, Internet, media, supportive cancer care centre, and doctors of traditional Chinese medicine. Participants revealed the need for consistent, credible and culturally sensitive information on the health effects of certain foods. The preferred means of delivery include a website and/or seminars conducted in Chinese by healthcare professionals who are familiar with Chinese dietary preferences.

Preface

This Master's thesis is an original, unpublished work performed by Brenda Ng. This thesis project was approved by the University of British Columbia (UBC) Behavioural Research Ethics Board (BREB). The number of the BREB certificate of approval was H14-01609.

Ms. Brenda Ng was the lead researcher who conducted this study under the supervision of Drs. Gwen Chapman, Ryna Levy-Milne, Lynda Balneaves and Zhaoming Xu. Drs. Chapman and Levy-Milne were the co-supervisors for this research study.

Ms. Ng identified this project and worked on the concept formation with Drs. Chapman, Levy-Milne and Balneaves. The three advisors also guided Ms. Ng on the development of the open-ended questions on the interview guide. The interview guide was subsequently translated into Chinese language by Ms. Ng. All translated documents have been validated by a medical professional, who is proficient in both English and Chinese.

Ms. Ng worked independently on the recruitment of study participants and conducted all interviews, data collection, translation and transcription. Dr. Chapman guided Ms. Ng throughout the thematic analysis phase, which involved coding and crosschecking the codes. Drs. Chapman and Levy-Milne guided Ms. Ng on analyzing data, identifying and generating themes. Both co-supervisors participated in and assisted Ms. Ng on the

organization of the focus group meeting to validate the preliminary study findings with the study participants. They also guided and supported Ms. Ng in preparation of this thesis.

All study participants were recruited at the BC Cancer Agency, Vancouver Centre with the assistance from the Medical Oncology Department.

All study participants received an honorarium of \$20 in the form of a gift card sponsored by Choices Market – a local grocery store in Vancouver.

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List of Abbreviations

B.C.	British Columbia
BCCA	British Columbia Cancer Agency
BREB	Behavioural Research Ethics Board
TCM	Traditional Chinese Medicine
UBC	University of British Columbia

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A special thank you goes to all my study participants for sharing your experience with me. You have inspired me to becoming a more attentive researcher to explore better ways to assist you in making dietary choices post-cancer diagnosis.

Last but not least, I owe my utmost gratitude to my dear parents, Mr. Michael Ng and Mrs. Susie Ng for their guidance and support over many years of my

education.

Dedication

I would like to dedicate this thesis to all my study participants. Their contributions are pivotal to the completion of this study.

I would also like to dedicate this thesis to my parents, Mr. Michael Ng and Mrs. Susie Ng for their trust, love and support throughout many years of my education.

Chapter 1: Introduction

Breast cancer is the most frequently diagnosed cancer in women in Canada (Canadian Cancer Statistics, 2015). Many women with breast cancer believe that diet is associated with breast cancer and adopt dietary change after cancer diagnosis to prevent recurrence (Adams & Glanville, 2005). Studies performed with Canadian women diagnosed with breast cancer indicated that 41-57% of these women reported dietary changes after cancer diagnosis (Beagan & Chapman, 2004; Maunsell et al., 2002), with decreases in animal foods (77%) and increases in fruit and vegetable (72%) intake being the most prominent (Maunsell et al., 2002). These women changed their diet post-diagnosis for various reasons, including reducing the risk of recurrence and improving overall health for themselves and their families. However, some of these women expressed confusion when making food choices as they received different advice on diet and nutrition from healthcare professionals and their social network. Dietary decision-making processes are complicated and affected by an array of factors, such as diet-cancer beliefs, social and cultural factors (Beagan & Chapman 2004). Breast cancer patients from specific ethno-cultural backgrounds may face unique challenges when making food choices, as traditional beliefs and practices are embedded in their cultures.

Vancouver, British Columbia (B.C.), is a multicultural metropolis and various ethnic groups have culturally distinctive views on food and its consumption (Bell, Lee &

Ristovski-Slijepcevic, 2009). This includes the Chinese, who constitute the largest visible minority population in this city (Statistics Canada, 2011a). Studies have shown that Chinese cancer patients in other countries integrated their cultural beliefs about food and diet-related traditional Chinese medicine (TCM) concepts to prevent cancer recurrence and promote health (Ashing-Giwa et al., 2004; Chiu et al., 2005; Leng et al., 2012, Simpson, 2003). In addition, Chinese cancer patients have emphasized the need for linguistically and culturally appropriate information on the role of food, nutrition and TCM in cancer. One study conducted in B.C. exploring the perceptions of food and eating among Chinese cancer patients showed that these patients expressed confusion around making dietary choices (Bell, Lee & Ristovski-Slijepcevic, 2009). However, there are currently few culturally specific resources on dietary information available for Chinese cancer patients residing in B.C. Research assessing the needs of cancer patients on how they manage their cancer and cope with quality of life, including making dietary choices, has primarily been done based on Western perspectives using Caucasian populations (Simpson, 2003a). Limited studies have been conducted to understand the perceptions of food and experience in making dietary choices and information needs among Chinese women living with breast cancer in Vancouver, despite the large immigrant population in this city. Although there is no record of ethnicity for breast cancer patients collected by the BC Cancer Registry, it has been estimated that the number of women of Chinese heritage diagnosed with breast cancer who have received treatment at BC Cancer Agency (BCCA) is significant (Yavari et al., 2010). In addition, an ethnographic study exploring the

perceptions of food and eating among Chinese cancer patients living in B.C. indicated that these patients encountered confusion when making dietary choices post-diagnosis and expressed the need for culturally specific diet-related information (Bell, Lee & Ristovski-Slijepcevic, 2009). Given that there is a significant number of women of Chinese heritage diagnosed with breast cancer and received treatments at BCCA, an in-depth study to explore how these patients make dietary choices and to understand their information needs around diet and nutrition is warranted for public health interest.

For this thesis research, a qualitative study that used individual, semi-structured interviews and a follow-up focus group session was conducted to explore the dietary choices, perceptions of food and eating during the cancer trajectory, and specific information needs on food and nutrition among first and second-generation Chinese Canadian women living with breast cancer in Metro Vancouver. Study findings may facilitate communication between patients and healthcare professionals, provide implications for clinical dietetic practice, and help guide development of culturally relevant resources to support this population.

Chapter 2: Present State of Knowledge and Study Purpose

Canada is a multicultural country with visible minorities making up 24% of the population (Statistics Canada, 2011a). Most Chinese immigrants in Canada predominantly settled either in the Greater Vancouver or Greater Toronto area (Statistics Canada, 2007). British Columbia has the highest number of visible minorities (24.8%) among all provinces (Statistics Canada, 2011b) and Chinese immigrants constitute the majority of the visible minority population in Vancouver, with about 15% speaking Cantonese, Mandarin or a not-specified Chinese dialect (Table 2.1).

According to Canadian Cancer Statistics, breast cancer is the most frequently diagnosed cancer in women. In 2015, there were 25,700 new cases of breast cancer in Canada, 3,400 of which were found in B.C. (Canadian Cancer Statistics, 2015). Breast cancer has also become a major health concern in Chinese communities in the province. Although no record of ethnicity for breast cancer patients is collected by the BC Cancer Registry, it has been estimated that the number of women of Chinese heritage diagnosed with breast cancer who have received treatment at BC Cancer Agency (BCCA) is significant (Yavari et al., 2010). Yavari et al. (2010) compared the treatment received by breast cancer patients in B.C. in three ethnic groups, namely: Chinese, South Asian, and Iranian. The study showed that 65% of all cases analyzed (n=3009) had Chinese last names identified on the patients' charts (n=1958). In

**Table 2.1 The most common non-official language mother tongues in Vancouver, B.C., 2011
Census (Statistics Canada, 2011)**

Mother tongue	Number	Percentage of non-official language mother-tongue population	Percentage of total population
Panjabi (Punjabi)	147,725	15.1	6.4
Cantonese	133,405	13.6	5.8
Chinese, n.o.s.	115,635	11.8	5.0
Mandarin	92,420	9.4	4.0
Tagalog (Pilipino, Filipino)	68,285	7.0	3.0
Korean	45,305	4.6	2.0
Persian (Farsi)	35,725	3.6	1.6
Spanish	34,590	3.5	1.5
German	28,590	2.9	1.2
Hindi	26,165	2.7	1.1

(Chinese n.o.s – non-specified dialect of Chinese language)

In addition, Kwong, Mackenzie and Barroetavene (2009) indicated that from April 1, 2007 to March 31, 2008, Vancouver Cancer Centre had approximately 4500 requests for a Cantonese / Mandarin interpreter service (78.7% of overall requests) with the Provincial Language Services. These statistics suggest that a high number of cancer patients of Chinese heritage receive treatment and care at the Vancouver Cancer Centre. However, limited studies have investigated the culturally specific information and resource needs for this population to help them

manage their cancer and cope with quality of life issues. For example, little is known regarding food and nutrition information and education needs to support these patients in making informed dietary choices for symptom management, promotion of health-related quality of life and prevention of recurrence.

Many women with breast cancer in Canada believe that diet is associated with cancer and recurrence (Adams & Glanville, 2005) and have adopted dietary changes to reduce the risk of recurrence. However, research assessment tools and nutrition-related supportive programs developed for cancer patients are primarily based on Western perspectives and conventional medical approach (Simpson, 2003a). There are currently few culturally specific resources related to nutrition education available to support Chinese women diagnosed with breast cancer at the BC Cancer Agency, despite the large immigrant population in Vancouver and other parts of the province.

As breast cancer is the most frequently diagnosed cancer in women in Canada (Canadian Cancer Statistics, 2015) and Chinese being the largest visible minority in Vancouver (Statistics Canada, 2011b), an in-depth understanding of the dietary beliefs, confusion and difficulties these patients encountered when making dietary choices is warranted. In the following sections, recent research of relevance to this study is reviewed. A brief literature review on topics related to the dietary beliefs, practices, dietary decision-making and information needs of Chinese women living with breast cancer was conducted prior to data collection in early 2015. The more complete review reported here was conducted during the data

analysis phase, to explore topics that emerged as relevant during the study, including the meanings of food in Chinese culture, traditional Chinese dietary beliefs, women's roles with family and food in Chinese culture, the dietary information needs of immigrant Chinese cancer patients.

2.1 Cultural meanings of food

Food is the centre of social life in Chinese culture and is used to express the degree of interpersonal relationships, conveying different meanings and denoting social economic status (Ma, 2015).

Degree of interpersonal relationships – As different foods convey different meanings, sharing and/or preparing specific types of food indicates the closeness of interpersonal relationships in the Chinese culture (Ma, 2015). For example, colleagues or friends would have meals together in a food court or cafeteria while very close friends would treat each other with expensive and rare food for dinner. For family members, they would carefully prepare and serve meals with the freshest and most nutritious ingredients as a token of love to each other as family is the basic structural and functional unit in the Chinese culture (Wright, Watson & Bell, 1996). In addition, when a family member is diagnosed with illness, such as cancer, it becomes a family affair. In a study performed by Simpson (2003b) on the beliefs and adaptation strategies of Chinese breast cancer patients and their

families in Hong Kong, it was found that family members often expressed their care and emotions to the patients with food that they believed would benefit the health of the patients rather than words. For example, it was common for them to boil traditional Chinese soups with specialty ethnic ingredients for prolonged period of time.

Conveying different meanings - Different foods convey different symbolic meanings, especially when celebrating festivities or important events. For example, most Chinese will consume moon cakes made with sweetened lotus seed paste and preserved duck egg yolks to celebrate Mid-Autumn Festival, also known as Full Moon Festival. The moon cakes symbolize completeness and reunion in the Chinese culture. As for Chinese New Year, rice cakes and turnip cakes prepared with preserved meats are consumed as they symbolize “promotion” and “improvement” in the New Year and good fortune (Ma, 2015). For birthdays, noodles are consumed because the long threads of noodles symbolize longevity. Food is consumed not only to meet physiological needs but also to convey meanings during celebrations and transcend blessings to families and friends. One study performed with Chinese cancer patients in Vancouver indicated that being able to consume a good amount of food, knowing what to eat and how to eat are viewed as “blessings” and “good fortune” in the Chinese culture. There is a common folk expression in Cantonese – “Sik Duc Hei Fook” denoting that being able to eat is a blessing and Chinese people often greet each other with the question, “*Have you eaten?*” (Bell, Lee & Ristovski-Slijepcevic,

2009) instead of simply asking. "*How are you doing?*" This common greeting among Chinese people that involves food encompasses expressions of care and blessing in the culture.

To denote social economic status – Certain foods are seen as a delicacy in Chinese culture and consumption of these foods denotes fortune and high social economic status. These are usually protein-rich foods, such as shark fin and lobsters (Ma, 2015), which often are presented as main courses at a Chinese wedding banquet. It is important to serve guests with delicacies during special social gatherings in the Chinese culture as the types of foods served represent the social status of the host as well as convey respect and gratitude to the guests for their attendance.

2.2 Traditional dietary beliefs

Food and diet have very complex meanings in the Chinese culture. They are associated with many philosophical aspects in the society and considered as an important influence on health and illness (Simpson, 2003). For over 4000 years, Chinese and many Asian populations believe that there are two opposing forces manipulating the universe and human beings, namely “Yang” (hot) and “Yin” (cold) (Lee & Shen, 2008). The general belief that all foods have either hot or cold properties is also very common among Chinese who have migrated to Western countries, such as Chinese Americans living in California (Lee & Shen, 2008). In addition, dietary practices based on traditional Chinese health beliefs, such as balancing hot and cold foods for health promotion, were found to be prevalent among healthy Chinese Canadians in Toronto (Kwok et al., 2009). According to the concept of dietary therapy in TCM, hot (yang) foods have a tendency to warm the body while cold (yin) foods dispel body heat (Koo, 1984). Ginger, chili, beef, lamb, curry, hot and cooked foods in general have warming properties and are, therefore, considered as hot (yang) food. On the other hand, watermelon, tofu, seaweed, raw and chilled foods are cold (yin) foods (Lee & Shen, 2008). Optimal health is a result of the equilibrium between the hot and cold energy. Likewise, illness would result from a shift in the balance incurred by extreme diets, lifestyle factors, climate and emotional stress. Such imbalance may lead to loss of vitality and malfunctioning of internal organs, which contribute to systemic illness over time (Simpson 2003a).

It is also a traditional Chinese dietary belief that certain foods “cause” diseases while other foods can help “fight” them (Koo, 1984; Mok & Martinson, 2000). For example shrimp, crab, chicken and goose are believed to cause the recurrence of cancer (Bell, Lee & Ristovski-Slijepcevic, 2009). It is common for Chinese to describe certain foods as “duk” (poisonous in Cantonese), which indicates that those foods might cause and/or aggravate diseases. The concept of recognizing and designating the poisonous-tonic nature of food has helped guide Chinese to make dietary choices for generations.

Traditionally, the Chinese diet is composed of grains, vegetables, fruits and soy with moderate amounts of meat and dairy (Gee, 2015). Chinese Canadians residing in Vancouver are a heterogeneous group and have diverse linguistic and cultural backgrounds. They migrated to Vancouver mainly from Hong Kong, Mainland China and Taiwan. Chinese from Southern regions of China, such as Guangzhou and Hong Kong, are predominantly Cantonese speaking. Rice, traditional homemade soups and dim sum have been the staple foods in the diet of the Cantonese (Ma, 2015). Chinese growing up in Hong Kong in the 20th century also adopted a Canto-Western fusion type of dietary practice, as Hong Kong was a British colony during 1841-1997. Hong Kong has been referred as the “Crossroad of Chinese and British societies” (Simpson, 2003a) and the food culture was shaped by both Western and traditional Chinese beliefs and practices. On the contrary, in Northern China, where the climate is relatively

colder and Chinese in the Mainland consumed mostly steamed buns, noodles made out of wheat flour and dumplings consisting of meat and vegetables. Geographically, Mainland China and Taiwan are neighbours separated by the Taiwan Strait and West Pacific Ocean. Although Chinese originating in these two regions are predominantly Mandarin-speaking, their food cultures are quite different due to their historical and political backgrounds. Taiwanese cuisine is shaped by influences from Southeastern China (mainly the province of Fujian) and Japan as Taiwan was ruled by Japan from 1895-1945. Rice, noodles, soy products, strong-flavoured dishes seasoned with Red yeast rice and sesame oil are staple foods consumed in Taiwan. Despite the heterogeneity within the group, Chinese from all regions share the core beliefs that food provides not only nourishment to one's body but has curative values and can dissipate potential disease-causing factors. Furthermore, there is an inseparable relationship between traditional Chinese dietary therapy and TCM (Simpson, 2003a). Many Chinese use TCM and dietary therapy to complement conventional medical treatments in cases of illness, including cancer (Koo, 1984; Leng & Gany, 2014; Simpson, 2003a; Wang, Windsor & Yates, 2012).

It is evident that dietary manipulation has been used to complement Western medicine at different stages of diseases among Chinese in Hong Kong (Koo, 1984; Simpson, 2003a). An earlier study pointed out that there was a core tradition of "self-care" in cases of sickness, which led to the culture of practicing "self-medication" among Asian patients despite their firm belief in conventional

Western medicine and trust in their healthcare professionals (Manio & Hall, 1987). Other studies conducted between 1984 and 2014 also indicated that Chinese living in Hong Kong and Chinese immigrants originating in China, Hong Kong and Taiwan adopted traditional Chinese cultural beliefs in making dietary choices and coping with illness (Koo, 1984; Tsai et al., 2011; Chung et al., 2014).

Chinese breast cancer patients from all regions (i.e. China, Hong Kong and Taiwan) have been found to frequently refer to TCM theories, such as hot-cold balance concept, Qi-blood, medicine food homology when interpreting illness or giving rationales for consuming certain food to achieve specific health benefits (Chung et al., 2012; Hou & Jiang, 2013). Chinese cancer patients who have migrated to Western countries have also been found to adopt such beliefs. One study conducted with Chinese American breast cancer patients residing in California indicated that the patients adopted certain TCM theories (Tsai et al., 2011) when coping with illnesses and making dietary choices. Another study reported that Chinese Australian cancer patients would consume more watermelons, as they believed that the fruit is cold in nature and could offset the “excessive heat” generated by radiation therapy (Chui, Donoghue & Chenoweth, 2015). The “hot-cold” balance under the TCM concept was described and applied when these patients made dietary choices. In an older study conducted in the US, Chinese American breast cancer patients reported adopting traditional dietary beliefs by practicing dietary restrictions. They eliminated eggs and shellfish as they considered these foods “poisonous”, and believed they could

aggravate and worsen cancer conditions (Ashing-Giwa et al., 2004).

Healthy Chinese Canadians have been found to use both Chinese and Western cooking methods and implemented the TCM hot-cold (yin-yang) balance concept to various degrees when making food choices (Kwok et al., 2009). One ethnographic study conducted with Chinese patients diagnosed with various types of cancer in Vancouver found they also held traditional dietary beliefs, in general (Bell, Lee & Ristovski-Slijepcevic, 2009). These patients had culturally distinctive views on food and its consumption and reported being confused about dietary choices for cancer recurrence prevention and health promotion.

Moreover, the ethnographic study stated that Chinese Canadian cancer patients often experience great pressure in making informed dietary decisions when conflict between Chinese dietary therapy and Western dietary practices arise. It is uncertain whether Chinese breast cancer patients living in Vancouver adopt similar beliefs when making food choices and whether they encounter the same confusion and anxiety when selecting food and preparing their meals.

In Chinese dietary therapy, food has been intimately related to health and many foods are considered to have curative value (Chang, 1977; Liu, 2004). The notion of balance between the forces for yin and yang guides the classification of use of food for medicinal purposes. Interestingly, the yin and yang system can also be nutritionally applied as it creates a balance of animal protein, grains and vegetables (Bell, Lee & Ristovski-Slijepcevic, 2009). One early study reported that Chinese cancer patients and their families who have traditional dietary beliefs

may not follow recommended diets if the food components do not balance in terms of yin and yang foods (Ludman, Lynn & Newman, 1989). Culture and belief systems shape the decisions on dietary choices and dietary change behaviour of Chinese to manage symptoms and cope with health-related quality of life issues after diagnosis (Simpson, 2003a). However, it is unknown what factors influence Chinese women with breast cancer in Vancouver when making dietary choices.

2.3 Women's role in the family – The Chinese culture

Food decision making is a complex process and can be affected by an array of factors including food availability, family preference, identity, social status, environment, habits, media influences and health concerns (Furst et al., 1996; Wetter, Goldberg & King, 2001). In addition, it is important to consider how the deeply-rooted roles of self-sacrificing and being able to fulfill the needs of all family members in Chinese culture (Kwok & White, 2011) may influence women's decision making related to diet in the context of illness. Simpson (2003a) found that family preference exerted strong influence on Chinese women with breast cancer on decision-making regarding meal planning and dietary therapy after diagnosis. In Chinese culture, women play a major role in deciding and preparing meals for their families (Satia et al., 2000) and differing opinions from family members are a strong influence on their practices and consumption (Simpson,

2003b). As a consequence, women with breast cancer may place their own dietary needs and change behaviour secondary to the needs and wishes of their family related to food choices.

Beagan and Chapman conducted a study in 2004 with women living with breast cancer in Canada and indicated these women would sacrifice their desires for the food they liked in order to satisfy the preference of their family members. Most of the study participants were Caucasian, but three were Canadian-born Chinese Canadians and four were born in Asian countries. About 41-57% of women with breast cancer in Canada reported dietary change after diagnosis (Beagan & Chapman, 2004; Maunsell et al., 2002) but they would still consider family preference when making food choices at home. It is uncertain how the sacrificing role of women in the family affects first and second generation Chinese Canadian women living with breast cancer in Vancouver and whether they encounter any barriers when preparing meals for their families.

2.4 Information needs of Chinese cancer patients in countries other than Canada

Several research studies have investigated the information needs on diet and nutrition of Chinese and Asian breast cancer patients in various countries other than Canada (Kwok & White, 2011; Lee et al., 2013; Leng et al., 2012; Leng et al., 2014, Simpson, 2003) and indicated that there was a need to develop

linguistically and culturally sensitive resources to support the patients. Chinese and Korean American breast cancer survivors (Chinese Americans n = 4) expressed that there was a need for culturally appropriate resources on food and nutrition for breast cancer (Lee et al., 2013) as the lack of culturally relevant resources was one of the major barriers to maintaining good quality of life among the immigrants. Another study with Chinese Australian women living with breast cancer indicated that these women felt isolated and stressed after cancer diagnosis due to their poor English proficiency and a lack of culturally appropriate information, including information around diet and nutrition to support their recovery process (Kwok et al., 2011). In addition, Lu et al. (2014) evaluated a culturally specific peer-mentoring and education intervention program tailored for Chinese American women with breast cancer in Southern California. The program involved presentations conducted in Chinese language on diet and nutrition and TCM delivered by registered dietitians and doctors of TCM, respectively, and was associated with a decrease in psychological stress among the patients after a 10-week intervention.

Despite the success of the peer-mentoring program that delivered culturally relevant information to Chinese American breast cancer patients related to diet and nutrition (Lu et al., 2014), cultural barriers remained. In the Chinese culture, health professionals are seen as authority figures and many patients are hesitant or do not explicitly seek information related to health and treatment options (Simpson, 2003a). Chinese patients and their families are often reluctant to seek

further clarification on information they do not understand and tend to be unwilling to discuss the information if it does not comply with their cultural beliefs or if they think a conflicting situation may arise from such discussion (Simpson, 2003a). These patients and their family members expressed uncertainties regarding the types of foods they should prepare to support the patients but they were eager to learn from various sources (Simpson, 2003a). Many Chinese families also expressed confusion about preparing an “appropriate” diet for their family members who were living with breast cancer as they had been receiving different advice from multiple sources (Simpson, 2003a). Similar findings from another study (Bell, Lee & Ristovski-Slijepcevic, 2009) revealed that uncertainties around food and nutrition are the recurrent focus among Chinese cancer patients and their families in Vancouver.

2.5 Purpose of this study

As reviewed above, previous studies have explored the dietary beliefs, perceptions of food and information needs of Chinese cancer patients in other countries. Canada is a multicultural country and Chinese immigrants constitute the majority of the visible minority population in Vancouver, with about 15% speaking Cantonese, Mandarin or Chinese language-not-specified (Table 2.1). However, little attention has been focused on the needs of the Chinese women living with breast cancer in Canada and more specifically, Vancouver, despite its large immigrant population. It is unknown how traditional beliefs, family

preference, food availability, social and cultural factors influence the dietary decision-making process of first and second-generation Chinese Canadian breast cancer patients. It is important from a public health perspective to better understand if members of this growing population face any difficulty when making food choices and coping with cancer. From a clinical perspective, healthcare providers lack information about the specific communication and resource needs of this population. Therefore, this thesis research was conducted to gain an in-depth understanding of how Chinese breast cancer patients in Vancouver make dietary choices.

Based on the review of literature relating to dietary choices of Chinese breast cancer patients in countries other than Canada, the following areas for exploration and related research questions were identified. These questions are general and cover a wide scope of areas relevant to the study. In qualitative research, the initial research questions are quite broad and more specific themes emerge during data collection and analysis:

(i) What are the dietary beliefs and practices of Chinese women living with breast cancer in Vancouver?

(ii) What factors do Chinese women living with breast cancer in Vancouver consider when they make food choices?

(iii) Who and what sources do Chinese women living with breast cancer in Vancouver turn to for diet-related information?

(iv) What are the information and resource needs around making dietary choices among Chinese women with breast cancer in Vancouver?

(v) What are the perceptions about current resources/nutrition support services with a biomedical/Western dietary approach among Chinese women with breast cancer in Vancouver?

Chapter 3: Methods and Design

3.1 Methods and procedures

This study was informed by a qualitative paradigm, combining individual, semi-structured interviews and a follow-up focus group session to explore the attitudes and rationales that construct the dietary beliefs and practices among Chinese women living with breast cancer in Metro Vancouver. Qualitative research methodologies were used to gain an in-depth understanding and to answer the “How” and “Why” questions pertaining to the decision-making experience on food choices among the participants. Semi-structured interviews and the data generated gave an understanding of the phenomenon in the context of individuals. These data were then further confirmed and enriched by the findings collected during the focus group session. The integration of the two methods allowed the emergence and confirmation of the main characteristics of the phenomenon across individual interviews and the focus group session (Lambert & Loiselle, 2008).

Within the broad qualitative paradigm, this study utilized the specific methodology of Interpretive Description. Interpretive Description is an inductive analytic approach designed to create ways to answer questions related to human health and illness experience for the purpose of generating knowledge and yielding implications for clinical practice (Thorne, Kirkham & Macdonald-Emes, 1997).

Researchers using Interpretive Description use multiple data collection approaches to enhance credibility of their findings. Data analysis is directed towards identifying meanings, characteristics and patterns in the data to structure theoretically sound and clinically useful findings.

3.1.1 Sampling

In qualitative research, there is no fundamentally right way to recruit a representative sample (Thorne, 2008) because qualitative research does not focus on studying the central tendency of a large population but, instead, aims for an in-depth understanding of the opinions or perspectives of specific and smaller groups (Palyps, 2008). Qualitative studies tend to use purposive sampling methods to recruit participants with the most relevant characteristics to the research topic (Lubrosky, 1995). To explore the research questions comprising this study, it was necessary to recruit participants who could represent a range of dietary beliefs and practices experienced by Chinese women with breast cancer in Vancouver. The inclusion criteria limited participation to first and second-generation Chinese Canadian women in Vancouver who were diagnosed with breast cancer within the last five years and could speak Cantonese, Mandarin or English. According to the definitions given by Statistics Canada 2011, first-generation refers to people who were born outside of Canada, while second-generation refers to Canadians who were born in Canada and had at least one parent born outside of Canada (Statistics Canada, 2011c).

Within the limits of the inclusion criteria, purposive sampling was used to recruit participants who were at different stages of their cancer diagnosis, from newly diagnosed patients who were on active treatment to those who had completed all treatments and were in recovery phase up to five years post-diagnosis. The reasons for using five years as the cut-off was because after this time, cancer patients are considered “cured” based on statistics on the five-year survival rate in North America (www.breastcancer.org) and to limit recall bias. Therefore, the findings of this study would reflect perspectives from Chinese women with breast cancer, at various stages of breast cancer trajectory. In addition to recruiting women at various stages of the cancer trajectory, purposive sampling was also used to recruit a sample of participants with diverse demographic characteristics, which could represent the demographics of the actual Chinese breast cancer population in Vancouver. The recruited participants varied in age (pre- and postmenopausal women), place of birth, language spoken (English, Cantonese or Mandarin), immigration status (new or established immigrants and second generation Chinese) and length of residency in B.C.

To recruit participants, a poster (Appendix A) and an “Invitation to Study” card (Appendix B) in English and Chinese were created. With the approval and assistance from the Clinical Nurse Leader of the Ambulatory Care Unit (ACU) at BCCA, Vancouver Centre (VC), the researcher was able to leave copies of the poster and “Invitation to Study” cards in the outpatient clinic areas. The

outpatient clinic is where cancer patients attend consultation/follow up appointments with their oncologists. The researcher also approached six medical oncologists who specialized in treating patients with breast cancer and presented details about this study to them. The oncologists were asked to disseminate the “Invitation to Study” cards to potential participants during clinic times.

Besides approaching the outpatient clinic, the researcher distributed the “Invitation to Study” cards at the Chinese Support Group, a professionally facilitated group that operates under the Patient and Family Counseling Department of BCCA. This support group holds monthly meetings led by a social worker to provide psycho-education and emotional support for Chinese-speaking patients with cancer and their families. The researcher obtained written consent from the director of the department to recruit participants from the group and introduced this study to the attendees during their meetings.

Participants who were interested in this study then contacted the researcher via telephone or email. The researcher replied and asked relevant questions to ensure that the participants met the inclusion criteria. Furthermore, the researcher sent copies of the consent form to potential participants and explained that it was mandatory and required by the University of British Columbia (UBC) Behavioural Research Ethics Board (BREB) for the participants to read, understand and sign the consent form before they could take part in the study. All participants met the inclusion criteria, and signed and returned the consent

forms to the researcher before the interviews took place. Interview dates and times were then established by the researcher and participant.

As recruitment progressed, participants' demographic characteristics and time since diagnosis were noted to ensure that the sample included participants with a range of characteristics. For the most part, the desired variety was obtained: the study group included women from a range of places on the breast cancer trajectory, Mandarin, Cantonese and English speakers, and both recent and longtime immigrants. However, the first 17 participants included only two second-generation Chinese Canadian women. Therefore, to recruit the final participants, oncologists were specifically asked to recommend the study to second-generation Chinese Canadian women diagnosed within the last five years in the breast clinic, resulting in the addition of two more second-generation women to the sample.

As there is no calculation on power analysis in qualitative research to estimate the minimum number of participants required in order to generate credible findings (Sandelowski, 1995), a data saturation approach is typically utilized. The concept of data saturation was introduced to the field of qualitative research by Glaser and Strauss (1967) and refers to the point in data collection when new additional data do not contribute to further development of a conceptual category. More specifically, in qualitative studies where sample size is based on saturation, recruitment of participants, data collection, data analysis and member checking

on preliminary data are carried out concurrently until no new themes, findings, concepts or problems were evident in the data (Bowen, 2008; Francis et al., 2009; Morse, 2007). For this study, the researcher used the data saturation approach to keep recruiting participants and collecting data until a redundancy of information was reached, resulting in a sample of 19 women.

3.1.2 Research ethics and informed consent

This research study was approved by the Supervisory Committee and UBC BREB (Certificate: H14-01609). A consent form was developed in English and Chinese versions and both were approved by the BREB (Appendix C).

3.1.3 Data collection

A demographic questionnaire, semi-structured interviews, and a follow-up focus group session were used to collect data from study participants.

Questionnaire - A questionnaire was developed to collect demographic data to ensure recruitment of a varied sample and to aid in interpretation of interview data. Questionnaire variables included date of birth, place of birth, language spoken at home, places of birth of parents, year of migration to Canada, date of breast cancer diagnosis, marital status, employment and highest level of education achieved. The questionnaire was translated into Traditional Chinese

and Simplified Chinese versions and validated by an independent healthcare professional who was proficient in both languages. The difference between the two versions are regional, which Simplified Chinese characters are used in Mainland China and Traditional Chinese characters are used in Hong Kong, Taiwan and by most overseas Chinese. Each participant was asked to fill out a questionnaire before the interview commenced. A copy of the complete questionnaire can be found in Appendix D of this thesis. The data generated from the questionnaire were then categorized and are presented in Table 4.1 – Characteristics of Study Participants.

Semi-structured interviews - An interview guide was developed for this study based on the interpretive description approach (Thorne, Reimer Kirkham and Macdonald-Emes 1997). It consisted of seven groups of open-ended questions intended to allow the participants to share and describe, in their own words, their thoughts, feelings, and experience with regard to making dietary choices before and after their cancer diagnosis. The questions were also designed to gain an in-depth understanding of the dietary beliefs, the dietary decision-making process and information needs of Chinese women living with breast cancer in Vancouver. A complete interview guide can be found in Appendix E.

The researcher is proficient in all three languages, namely English, Cantonese and Mandarin, and conducted each interview in the language(s) preferred by the participant. Each interview lasted for about an hour and was digitally audio-

recorded. In addition, the researcher wrote ideas and questions in a notebook during the process to capture any critical perspective expressed through verbal response, significant non-verbal expression observed during the interviews and/or uncertainties that she could revisit if clarification was needed. Individual interviews occurred between January and November 2015. Fifteen interviews took place at the participant's residence, two took place in a conference room at Vancouver Cancer Centre and the remaining two took place in local cafes. A code was assigned to each participant in order to protect the confidentiality of the participants.

All interview recordings were imported into the NVivo10 software, qualitative data analysis software for data management. The software has an audio playback function, which allows the recordings to be played back and looped at different speeds. The researcher used this function and transcribed verbatim the interview recordings into transcripts. For interviews conducted in Cantonese and Mandarin, the researcher translated the recordings to English at the time of transcription.

Focus group – A follow up focus group was conducted towards the end of the data collection and primary analysis phase of the study to confirm and elaborate on emergent themes. Because this was primarily to enhance the credibility of findings rather than to generate new themes, procedures relating to the focus group are described at the end of this chapter.

3.1.4 Data analysis

All transcripts generated from the interviews were imported into NVivo10 software for analysis. There were three major stages to the content analysis process, namely (i) manual coding and decontextualizing the data, (ii) sorting and categorizing the codes and (iii) developing topics and interpretive schema (Thorne, 2008). The purpose of performing content analysis is to generate knowledge and understanding of the phenomenon in the study (Hsieh & Shannon, 2005). The researcher performed data analysis and data collection concurrently as the analytic work informed the additional new data collection process while the new data steered the analysis, as well. The three stages of analysis contributed to the interpretation of meanings grounded in the textual data. It is noteworthy that in qualitative research, interpretation of data comprises not only the text generated from interviews but the assumptions, principles, values of the truth and reality that the researcher held (Thorne, 2000). The lead researcher (BN) is a first-generation Chinese Canadian who can speak English, Cantonese and Mandarin. She was born and raised in Hong Kong and migrated to Vancouver at a young age. Her cultural and social background, education and work experience acquired in Vancouver over the last 25 years have informed her assumptions regarding diet and cancer, principles of dietary beliefs and practices and women's roles within the family of Cantonese-speaking first generation and

English-speaking second generation women.

(i) Manual coding and decontextualizing data – During this first stage of the analysis, the researcher went through the transcripts manually and looked for any key terms and/or phrases that were most relevant to the research questions. These key terms and phrases identified were highlighted and a tag was created to identify the key terms and phrases. The researcher then listed these tags on the margin and the tags were used to generate codes during later stages of analysis. The codes could be a key word or a phrase to designate responses that shared common characteristics collected during the interviews.

With the use of a qualitative data analysis software (NVivo10), the researcher imported the transcripts and performed coding electronically as well. The researcher performed cross checking on the codes with her co-supervisors regularly during the entire process to minimize bias and ensure validity. In other words, the researcher verified with her co-supervisors that the codes she generated did reflect the corresponding excerpts accurately. There were a total of 107 codes and sub-codes generated during the coding processes. The researcher initially created a very long list of codes during earlier stages of analysis. Following a supervisory committee meeting, the researcher was encouraged to categorize the codes, which became sub-codes of a conceptually higher code. An example of the code is "*Diet after diagnosis*" and the sub-codes

generated under this code during the later stages of analysis are shown in Figure 3.1.

(ii) *Sorting and categorizing the codes* – When the codes and sub-codes were determined and the excerpts were sorted on NVivo10, the researcher was able to identify which code and sub-code contained common descriptions and characteristics in the excerpts. These codes and sub-codes were the fundamental data used to generate topics and subsequently to build the interpretive schema. The software also kept track of the number of transcripts (Sources) and the total number of excerpts (References) that contained descriptions coded and sub-coded under “*Diet after diagnosis*”

Code: “*Diet after diagnosis*”

An example excerpt tagged with this code:

“After diagnosis, I changed quite a bit. I eat very... quite a significantly less amount of meat; I don’t do fast food at all anymore... I cook at home a lot more greens and no more pop... no processed sugars, the occasional treat like a cookie once in a while but I don’t add any sugar to anything.”

Sub-codes under “*Diet after diagnosis*”:

Name	Sources	Refere...
▶ ● Current diet	0	0
▼ ● Diet after diagnosis	0	0
● Current diet less fat	5	7
● Current diet more fruits and veg...	6	12
● Diet after dx less meat	17	26
● Diet after dx organic produce	9	17
● Diet after dx would do anything	5	8
● Family context	3	10
● Feelings towards food changed	4	5
● More almond milk	4	4
● More beans lentils	2	2
● More mindful	10	14

Figure 3.1 Sorting and categorizing codes with NVivo10 – an example of the code “*Diet after diagnosis*” and the associated sub-codes

(iii) *Developing topics using an interpretive schema* – An interpretive schema in the form of an Excel spreadsheet was created. The spreadsheet captured the relevant responses to each research question collected during individual interviews. Figure 3.2 shows an example on the interpretive schema on the development of the theme “*Diet after diagnosis*”.

Category/ Participant	#003	#004
DIET AFTER DX	Less beef Mostly pork, chicken, fish Loves shelled seafood Stayed away from bbq food Diet change with aging Oyster sauce is poisonous Ate fruits after dinner	Pan-fried patties with less flavourings and/or with no MSG Consider nutritional value first No snack and no late night snack Took TCM herbal tonic prescribed by DTCM to support recovery (Buck Kei, Dong Shen Red Dates)
DEGREE OF CHANGES	A little different Some difference	Some difference
ANY DIETARY RESTRICTION AFTER DX?	BBQ food No meat in Traditional Chinese soups Less beef Mostly pork, chicken No oyster sauce	No snack and no late night snack Cold natured vegetables: Napa cabbage, Daikon
WHAT IS CHANGING?	Eat apple before going to bed Want to go for more vegetarian diet but concerned about husband's pref (barrier? Family relations?)	Concerned about food ingredients Select more nutritious food

Figure 3.2 Interpretive schema showing categories of codes and descriptions

The researcher listed all the relevant responses to the code using the spreadsheet. The codes listed in Figure 3.2 such as “*What is changing?*” and “*Any dietary restrictions after diagnosis*” were used to inductively develop the theme “*Dietary change post-cancer diagnosis*” during the later stages of the analysis.

3.2 Rigour

Qualitative research is often criticized for being small-scale, anecdotal and lacking in rigour (Anderson, 2010). Rigour refers to the quality and credibility of data and findings in qualitative research. Both quantitative and qualitative research methodologies can be performed to generate knowledge but their functions are based on different epistemological and ontological assumptions (Whittemore, Chase & Mandle, 2001). Therefore, the tools and systems for validating the trustworthiness of data generated from the two methodologies are different. Traditionally, validity and reliability are parameters used to evaluate the quality of quantitative data, but data generated from qualitative research cannot be directly assessed in the same manner. This does not mean that qualitative research studies are unable to produce credible and trustworthy data as they are performed to give in-depth understanding of a phenomenon or relationship (Sullivan, 2011); in other words, they answer the “Why” and “How” questions

rather than measuring the central tendency of a large population.

In qualitative studies, validity and reliability are not assessed at the end of the study. Instead, researchers incorporate strategies to enhance rigour and relevance at all stages of the research, including the initial stage of planning the study design, recruiting and interviewing participants, collecting and interpreting data and validating findings (Lambert & Loiselle, 2008). These strategies ensure the generation of credible and defensible findings (Thorne, 2008). Several techniques have been used in this study to enhance the quality of the data and to offset potential bias resulted from human subjectivity and misinterpretation. These strategies adhered to a set of evaluative criteria that are typically applied to the products of Interpretive Description, such as epistemological integrity, representative credibility, analytic logic and interpretive authority (Thorne, 2008).

Epistemological integrity – This criterion is about whether the research process is consistent with the underlying assumptions of the research questions. The purpose of this study was to get an in-depth understanding of how Chinese women living with breast cancer in Vancouver make dietary choices. To search for participants who met the inclusion criteria relevant to the study, the researcher used purposive sampling to recruit potential participants at the Vancouver Cancer Centre, where most cancer patients in Vancouver attend for cancer care. In addition, the research design of this study was developed based on Interpretive Description approach (Thorne, 2008), which was designed for research within the

context of applied health disciplines, such as Nursing and Dietetics. The research methodology and the process implemented in this study provide a defensible line of reasoning through to the interpretation of findings ground in the assumptions pertaining to human health and illness experience.

Representative credibility – This criterion is to ensure that the variations of the phenomenon under study are maximized and that the findings, claims and inferences are consistent with the phenomenon. The researcher used three techniques to achieve this criterion: (i) data saturation approach to determine when to stop recruiting participants (Glaser & Strauss, 1967); (ii) member checking during data collection and data analysis phases with co-supervisors for validation, and (iii) focus group session with the participants to confirm preliminary findings. In qualitative research, member checking and focus groups are techniques used for validating the data and ensuring credibility of findings. These techniques allow the researcher to study the phenomenon from different perspectives and convey completeness in the findings.

Analytic logic - Qualitative research in health science intends to inform practice-based disciplines and it is inherent that the researcher has the responsibility to not only ensure the credibility of the findings but also to communicate how the findings could be reasonably derived, interpreted and applied. The researcher kept an audit trail throughout the research process, including data collection, analysis and development of the interpretive schema. This trail includes notes

taken during interviews and the focus group session, codes generated during the manual coding process of transcripts, data analyzed with the qualitative data analysis software and the development of topics and themes with the use of an interpretive schema. The entire process of content analysis provides a logical reasoning pathway along which another researcher could presumably develop similar topics and generate the same findings (Erlandson et al., 1993; Leininger, 1994). All final interpretations ground in the data are retraceable with this line of reasoning.

Interpretive authority – the fourth criterion for enhancing quality of data in qualitative studies is to ensure that interpretation is revealing the truth about the phenomenon external to the researcher's own bias and/or experience. In addition, the final interpretation should represent common truths instead of individual subjective experience. The researcher performed member checking with the co-supervisors periodically throughout the research process in order to minimize injecting subjective opinions, especially during the development of topics using the interpretive schema. Furthermore, the focus group session was conducted as another form of member checking to ensure that more common truths were revealed as the participants confirmed the findings together as a group.

3.3 Focus group

A focus group was conducted on December 16, 2015 at the Vancouver Cancer Centre. The purpose of the focus group was to perform member checking in order to validate the preliminary findings generated from the individual interviews carried out between January 4 and November 9, 2015. The design of integrating a focus group session with the individual interviews in this study was to enhance the depth of the inquiry, identify the contextual and individual circumstances of the dietary decision-making process and ensure the trustworthiness of the findings (Lambert & Loiselle, 2008).

The format of the focus group session

An invitation and a consent form to participate in the focus group session were sent to all study participants via email. Six out of 19 study participants attended the focus group session and signed the consent form prior to the session. The session was conducted in English with Cantonese translation, as needed, by the researcher. The researcher prepared a PowerPoint presentation to present the preliminary findings generated from the individual interviews and distributed a hard copy of the presentation notes (Appendix G) to each participant so they could follow the five themes being presented. For each theme, participants were asked to consider a main question and three follow-up questions:

Main question:

What are your thoughts about the findings presented here?

Follow-up questions:

(a) In what ways is your experience the same/ similar?

(b) In what ways is your experience different?

(c) What is missing?

The three questions were displayed in the form of posters in English and Traditional Chinese in the conference room. The participants were then invited to verbally comment on the themes and findings based on the three questions. Towards the end of the session, each participant was invited to express one comment, suggestion, or opinion that she thought was important for to be acknowledged by the research team. The focus group session was digitally audio-recorded and notes were taken during the session.

As for data analysis, the lead researcher transcribed the recording and performing coding on the data with NVivo10. A copy of the notes taken during the focus group session can be found in the Appendix section (Appendix H). The two co-supervisors also attended the session and took notes as the participants were making comments on each theme presented. The lead researcher then

summarized all the notes collected during the focus group session on spreadsheet and compared to the responses generated from the individual interviews under each theme.

Chapter 4: Results

Characteristics of Study Participants

Table 4.1 shows the characteristics of the study participants. 19 first- and second-generation Chinese Canadian women aged 41-73 years residing in Vancouver and diagnosed with breast cancer within the last five years were recruited for this study. The time since diagnosis ranged from three months to five years. Among the 14 first-generation Chinese Canadian women, seven were Cantonese-speaking, six were Mandarin-speaking and one was English-speaking. The remaining five women were second-generation, predominantly English-speaking, Chinese Canadians whose parents migrated from Southern China to Vancouver. 14 women were married and most had children. The length of residency in Vancouver for the first-generation participants ranged from eight to 40 years. In terms of education, 16 participants had some post-secondary education, two were high school graduates, and one had completed elementary school.

Table 4.1 Description of study participants (n=19)

CHARACTERISTICS	FREQUENCY
Age (years)	
40-49	7
50-59	6
60-69	5
70 or above	1
Language currently spoken at home	
English	6
Cantonese	7
Mandarin	6
Place of birth	
Vancouver	5
China	4
Hong Kong	6
Taiwan	4
Time since diagnosis	
12 months or less	5
13-24 months	8
25-60 months	6
Marital status	
Single	2
Married	15
Divorced	2
Highest education level obtained	
Elementary school completed	1
High school completed	2
College/ Diploma	5
Undergraduate	10
Postgraduate	1

Findings – Five Major Themes

Five major themes were generated from the data: (1) Dietary change process, (2) Goals of dietary change, (3) Dietary beliefs and uncertainties, (4) Barriers and facilitators to the dietary changes, and (5) Information and resource needs.

4.1 Theme 1 - Dietary change process

Most participants believed that diet was one of the main factors contributing to their breast cancer diagnosis, although they were uncertain about the association. Prior to their cancer diagnosis, participants mainly made food choices according to their family's preferences. They generally prepared foods that had strong flavours as preferred by their families, with higher temperature cooking methods (e.g. wok). They also purchased produce that looked fresh and was in season, and consumed foods that they felt like eating and/or out of convenience. They selected among a variety of cuisines during the day and usually prepared traditional Chinese dinners at home in the evening.

Degree of Change

As shown in Figure 4.1, the degree of difference between women's pre- and post-cancer diets ranged one second-generation participant who stated that she made no dietary change after her cancer diagnosis to two women who described their

current diet as completely different from what they used to eat. Two women who changed her diet completely after diagnosis mentioned that their breast cancer conditions had turned her diet around. The majority of participants were between these two extremes, but most had made significant changes to their diet. As one of them described:

After diagnosis, I changed quite a bit. I eat ... quite a significantly less amount of meat, I don't do fast food at all anymore...I cook a lot at home, a lot more greens and no more pop... no processed sugars, the occasional treat like a cookie once in a while but I don't add any sugar to anything... (#016, 41 years old)

All six participants who attended the follow-up focus group agreed that they had changed their diet post diagnosis.

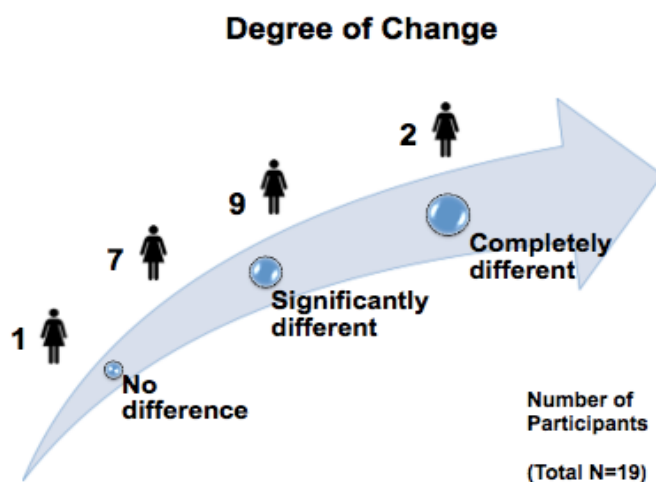


Figure 4.1 Participants' self-reported comparison of diet before and after breast cancer diagnosis

Types of Change

The main types of dietary change reported by most participants were that they (a) avoided eating certain foods, (b) consumed more of certain foods and (c) took traditional Chinese medicine (TCM) and nutritional supplements.

(a) Avoiding certain foods

Animal proteins - Almost all participants indicated that they reduced the consumption of animal protein food, including chicken, beef and salmon. Some indicated that they were concerned about antibiotics and growth hormone residue found in meat and dairy products:

I used to eat chickens but I am not eating that now as my traditional Chinese medical doctor told me not to eat chickens so I don't buy chickens now...I think... because they all contain hormones. The chickens are all injected with the vaccines... they received the same dose of the vaccines as the cows did but the chickens were way smaller in size (#012, 48 years old)

I used to have milk, soymilk, toast and sometimes oatmeal for breakfast but I am not drinking milk now as some people said that milk has hormones (#002, 61 years old)

A number of Cantonese-speaking and second-generation participants mentioned that they avoided certain foods such as ducks and seafood that they described as “Duk”, which means poisonous in Cantonese. Some participants believed that these foods might exert adverse effects on their cancer conditions and aggravate inflammation. One second-generation participant described how her mother told her to avoid eating ducks as follows:

Yes from my mum. She said ducks are “Duk” and I go “What does that mean?” She just kept telling me not to eat that... and she said she wouldn’t give me any bad advice. So for ducks, I was never supposed to eat that again. She also asked me not to eat shellfish although I am still eating shrimps, clams and mussels (#018, 45 years old)

Mandarin-speaking participants generally did not mention any food that they believed was “poisonous”. One participant actually expressed that she did not believe it was necessary for breast cancer patients to avoid eating ducks:

Yes I have heard but I don’t believe... actually not that I don’t believe... I don’t think it’s that serious... TCM often said it’s not good to eat ducks. Yes I eat ducks. TCM suggests that ducks are “Du” (note: poisonous in Mandarin) and it will make one “Fa” (note: flares up in Mandarin) like for people who just had surgery should not eat ducks and bananas as these will aggravate inflammatory

conditions... I just think this doesn't make sense (#005, 50 years old)

Soy products – A number of participants indicated that they avoided or ate less soy products, such as soymilk and tofu. They were mainly concerned about the effects of phytoestrogens found in soy on their cancer conditions. One first-generation woman shared the following reason she ate less soy products after diagnosis:

'Cuz soybeans are not good for our estrogen level... soybeans and breast cancer... I am very puzzled and have not been able to get any confirmed answer on the Internet. Some said soy products are good but it's very controversial. I am quite frustrated about soy products... (#014, 43 years old)

Deep-fried and barbequed foods - A number of women consciously stayed away from deep-fried foods that they used to enjoy but believed that those foods might have adverse effects on their cancer conditions:

I also tried to stay away from the food I like... I like meats. I like deep-fried pork chop, beef, beef noodle soup. I don't eliminate them completely but I would go for... let say beef noodle soup maybe only once a month now. I love deep-fried food but staying away from them... deep-fried meats and tofu... (#002, 61 years old)

This participant also commented that she would have a sense of guilt when consuming these “restricted foods” and described her behaviour as “cheating” when eating the foods she used to like occasionally:

Whenever I came across somewhere, someone advising not to eat certain foods (for cancer patients), I would try my best to stay away from those kinds of food but sometimes I cheated, I ate a little bit... (#002, 61 years old)

Processed foods and sugar - Besides meat, soy and deep-fried foods, several women stated that they avoided or had eliminated processed foods and sweets and sugars from their diets after diagnosis, as they believed that sugar might worsen their cancer conditions:

I heard that cancer patients should stay away from sugar, fats and meats in their diet... I used to eat lots of sweets before I had cancer. I tried to eat fewer sweets now but just can't totally eliminate sweets and desserts from my diet (#017, 42 years old)

When presented with these findings during the focus group, two women reiterated that they consumed less processed food products. One participant added that she started avoiding some traditional Chinese processed foods that she had grown up with, such as pickles and preserved vegetables, which she perceived as being highly processed and potentially high in sugar.

(b) Increasing consumption of certain foods

Fruits, vegetables, beans and lentils – Almost all participants mentioned that they have consumed more fresh fruits, vegetables, beans and lentils since they were diagnosed with breast cancer.

Organic foods - Half of the group indicated that they preferred buying organic produce wherever possible but cost and availability of these specialty foods were also determining factors when they shopped for groceries. Their main concerns were around the safety of consuming regular fruits and vegetables due to residues of chemical fertilizers and pesticides found in these foods:

I read some of the “dirty twelve”... apples and grapes were the ones that have the most pesticides on the outside... I think it’s on the Internet or someone told me after diagnosis...these are the dirty twelve.... since then...I tried to buy organic apples whenever I can (#007, 57 years old)

And I have been going for more organic produce than before... I can only try my best to get more organic as they are quite expensive... for better health. I know lots of food products contain many chemicals, pesticides (#011, 53 years old)

Traditional Chinese foods - Besides consuming more organic foods, most women

described that they preferred traditional Chinese foods after treatments, such as congee, rice noodles in fish soup and traditional Chinese homemade soups. One first-generation participant who spoke pre-dominantly English and had moved to Vancouver when she was eight years old indicated that she usually had a mix of Asian and Western cuisines in her everyday diet. However, during treatment, she found herself avoiding Western food that made her feel sick and craving traditional “comfort” food, such as congee, which reduced her nausea.

The congee did make me feel better because I craved it...or noodle soup...something like that... things I used to have when I was sick as a kid...it's comforting for me... that warmed me up and easy to consume... just comforting...it was very comforting (#007, 57 years old)

Another second-generation woman pointed out that she also preferred traditional Chinese food like congee and traditional soups when she was sick:

It's just soothing and comforting... it's comforting. Whenever I was sick my mum would always make those and I would feel better... but they are not in here (BCCA Nutrition Guide booklet) (#015, 55 years old)

A number of Cantonese-speaking and second-generation participants also indicated that traditional Chinese soups had curative value and they had been consuming these soups for health maintenance purposes:

... Soup has been the most important... Lo For Tong (note: traditional Chinese homemade soup) with Chinese yams, dried Goji berries, dried Lily bulbs and... pearl barley... pearl barley can help get rid of dampness in our bodies; Chinese yams can strengthen our kidney health and dried Longan too (note: Longan is a fruit native to China. The dried form of the fruit has been used as TCM)
<http://libproject.hkbu.edu.hk/was40/search?channelid=47953&lang=cht>
(#012, 48 years old)

These women also expressed that the practice of consuming traditional soups for health promotion has been an important part of the Chinese culture:

Many Chinese people, especially Cantonese believe and follow it every day, for example, Chinese people like to make homemade soups, which they will add many ethnic ingredients and Chinese herbs into it... the functions of these soups might not have been scientifically proven but the belief about drinking these soups for health promotion is connected to the TCM concepts and is deeply rooted in the Chinese culture (#017, 42 years old)

All of the second-generation participants recruited in this study were born to parents who were pre-dominantly Cantonese speaking and had moved from the Canton province in China to Vancouver between 1940 and 1955. It is interesting to note that a number of second-generation women mentioned that they would

make and/or consume these traditional soups for health promotion purposes despite having very limited knowledge about the soups. Almost all second-generation women shared that they used to drink certain traditional Chinese soups when they were young and living with their parents. They generally had no knowledge of the ingredients and/or health benefits of those soups and actually found the taste of certain soups to be unappealing. As one second-generation participant shared:

I didn't really like them [soups], as they were bitter. Some of it was ginseng... some are brown... it's almost like drinking dirt (#015, 55 years old).

However, they would still follow their parents' recommendations and drink the soups:

... every once in a while she [my mother] would do some special soups like that. I would drink it but it was gross... because she went through so much trouble and it was expensive and it's supposed to keep you healthy... (#018, 45 years old)

This second-generation participant spoke pre-dominantly English but expressed certain Traditional Chinese Medicine terms in Cantonese when she tried to describe the natures or beliefs about foods in the context of TCM. She did not have much knowledge about the health benefits of these soups but still believed in and consumed them:

But as I got older I learned to make some soups too ... I think it's healthier to have that once in a while and whenever we go on vacation or someone is sick I will make a pot of these soups or congee or something just to clear up cuz when you go on vacation you tend to eat lots of rich and bad stuff. (#015, 55 years old)

Despite the uncertainty about the benefits of traditional soups and the specific ingredients, several of the women consumed these soups during active treatment as a way to maintain a healthy diet and to improve their overall wellbeing:

I still make the soups 'cuz when I was going through chemo and everything I just wanted to get as much nutrients in me... pork bone soup with the big carrots and the green carrots and all these herbal things but I don't know what they are called. A friend showed me how to make it, I really don't know what I am putting in... apricot seeds, honey dates, something I can't even pronounce, I asked for the English names but they couldn't even tell me... so I know what to put in but I don't know what they are (#015, 55 years old)

During the focus group session, a number of women mentioned their beliefs on consuming traditional Chinese soups for health maintenance but they also expressed uncertainties as they had received conflicting information about the health benefits of these soups. Their comments substantiated previous findings on the beliefs and uncertainties around this ethnic food.

(c) Taking traditional Chinese medicine (TCM) and nutritional supplements

TCM – Several of the women reported taking TCM medicine in the form of capsules while those who had consulted with doctors of TCM consumed Chinese medicine in the form of decoction. Decoction is a preparation of herbs, botanicals (usually dried) and/or animal ingredients that is usually placed in water, boiled until the volume is markedly reduced, and the residues strained off. It results in an extraction of the ingredients' essence and medicinal potential and promotes rapid absorption and onset of action (Segen, 2012). The decoctions were usually prepared by the patients or some experienced technicians working with the TCM doctors:

My doctor of TCM prescribed some Chinese medicine for me... I boiled and drank this decoction about once or twice a week... He said this formula is good for promoting blood flow and getting rid of bruises; mainly to enhance my blood flow, getting rid of the toxins in the blood, like the Kombu and sea algae found in the formulation can help clear up the heat and toxins in the blood (#012, 48 years old)

A common TCM medicine that a number of participants took after their cancer diagnosis were mushrooms (i.e., Cordyceps or Reishi), which were consumed in either in capsules or soups. Many Chinese people believe that these mushrooms

have medicinal value, promoting their wellbeing and helping with cancer recovery. One first-generation woman who underwent breast surgery reported feeling increased strength and energy after making a soup from Cordyceps mushrooms:

I noticed that the soups were very helpful. I remember I had Cordyceps mushroom soups 3 days after I had my surgery... On the third day, I drank chicken with Cordyceps mushroom soup... I felt very good and regained a lot of strength...(#017, 42 years old)

For some participants, mushrooms were used as an adjuvant to chemotherapy. For example, one second-generation participant who took TCM mushrooms in capsule form reported seeking this treatment based on the positive experience of a close family member who had been given a poor prognosis:

My sister's mother-in-law got diagnosed with lung cancer and it wasn't a good prognosis and somebody recommended these mushroom pills and so she was going through the chemo and things that she was required to go through but the prognosis wasn't very good for her... we are not hopeful and so somewhere they heard about these mushroom pills and she started taking these mushroom pills... even the doctor said he didn't know what happened and what changed... he said all we can say is it's working... something is working... continue what you are doing so if it's the mushroom pills, if it's the chemo nobody knows right... he just

said something is working just continue with it... (#019, 51 years old)

Although many first-generation women took TCM in decoction or capsule form after diagnosis either to cope with symptoms or out of hope for cure, they still turned to conventional medicine for treatments and medications:

When I am sick, I will go seek medical advice from conventional medical doctor... we didn't really talk about diet and nutrition; we talked mostly about cancer treatment and medications. (#010, 67years old)

They used TCM and food to complement conventional medicine, as they perceived that TCM helped restore their health whereas conventional medical treatments and medications were aggressive and damaged their cells:

I believe TCM can help strengthen my body so that I won't be weakened by the chemo treatments... the chemo drugs are aggressive and can damage all my cells. I believe that TCM can support my body so to speed up my recovery. (#012, 48years old)

Besides using TCM and dietary therapy based on TCM concepts, a number of participants started taking nutritional supplements, such as grape extract, fish oil, calcium and antioxidant drinks after their diagnosis. One first-generation participant mentioned that she would take any supplement recommended by her

friends because she trusted them:

I started taking supplements when I started receiving chemotherapy treatments. My friends introduced the supplements to me... whatever they recommended to me; I believed they could save my life so I took them. (#012, 48 years old)

4.2 Theme 2 - Goals of dietary change

Almost all participants made dietary changes after cancer diagnosis, with many believing that food had curative value. They expressed the belief that food could heal their bodies holistically as well as help their bodies recover from the cancer. Four main objectives of dietary change were identified by the majority of the participants: **(a) to “do something” to help recover from their cancer; (b) to maintain a healthy body weight (c) to promote healthy eating habits in order to improve overall health for their families; (d) to manage symptoms and protect healthy cells against damage incurred from chemotherapy treatments.** All focus group participants agreed with these four goals when the preliminary findings were presented.

4.2.1 To “do something” to recover from their cancer

Several participants conceptualized their dietary change as a way “to do something” and “to try her best” and “to try harder” despite their uncertainties on

the effects of the dietary changes on their cancer and health:

Since I finished all treatments... I had a feeling that I needed to do something in order to keep taking good care of my health (#011, 53 years old)

I don't really believe that by making these dietary changes can totally prevent the recurrence of cancer but I will try my best (#003, 45 years old)

The desire to implement dietary change stemmed, in part, from their hope to recover from breast cancer and as a way to gain a sense of control. They wanted to take control of their health by changing their eating behaviour despite uncertainties around the health outcomes those changes might give, with the hope to recover from their cancer conditions.

4.2.2 To maintain a healthy body weight

A number of participants indicated that they changed their diet for the purpose of maintaining healthy body weight. Some women tried to maintain healthy body weight in order to improve overall health while others associated healthy body weight with reduction in risk of recurrence of cancer:

I have been trying to lose some of the weight so I have been trying to eat a little bit more carefully... I gained the weight during treatment and I know that

maintaining a healthy BMI is important to help reduce recurrence so I am trying to be a little bit healthier (#018, 45 years old)

and

My goal is mainly to have a cleaner bill of health and I lost weight too (#011, 53 years old)

and

Just to reduce my chances of recurrence...and just to be healthier as I am getting old, I don't want this extra weight, which can aggravate other diseases (#015, 55 years old)

4.2.3 To promote healthy eating habits and to improve overall health of their families

The majority of the participants were married and more than half had children. Almost all women with children mentioned that they changed their diets after cancer diagnosis because they would like to promote healthful eating habits and improve overall health for their families:

... I really don't want any of my family members has cancer... also I think by

consuming a healthier diet, it's also good for cardiovascular health. I want my family members to be healthy (#003, 45 years old)

In doing this too, it makes my family eat better too so which is better for them (#015, 55 years old)

4.2.4 To alleviate symptoms and protect healthy cells against damage incurred from chemotherapy treatments

Most participants believed in conventional cancer treatments and accepted chemotherapy but were concerned that such treatments might be aggressive and damage their healthy cells. Some participants changed their diets by consuming more traditional Chinese soups and/or taking TCM decoction during their conventional treatment regime, as they believed that the soups/decoctions could protect their healthy cells while receiving chemotherapy treatments and help them recover:

I believe TCM can help strengthen my body so that I won't be weakened by the chemo treatments. Chemo treatments made my body very weak... the chemo drugs are aggressive and can damage all my cells. I believe that TCM can support my body so to speed up my recovery (#012, 48 years old)

This participant also experienced serious numbness in her limbs after receiving

chemotherapy treatments and she made decoction out of traditional Chinese herbs and beef shanks, which she found helpful by relieving her discomfort:

I think the TCM decoction was helpful in terms of relieving the numbness in my fingertips (#012, 48 years old)

Another participant believed in and consumed traditional Chinese medicinal decoction prescribed by her doctor of TCM to help regain energy, as she felt quite weak after surgery. She also found that the TCM therapies supported her recovery and improved her appetite:

My body was very very weak during treatments... Conventional medicine couldn't help me... to support my recovery especially after I had the surgery... I was very weak... I believe in TCM, it works, very effective. It's actually the TCM decoction that brought my energy back... I relied on the TCM decoction a lot, as I was only able to eat very little (#009, 61 years old)

4.3 Theme 3 - Dietary Beliefs and Uncertainties

All participants were asked to describe their perceptions about healthy eating. Some of the perspectives were built upon traditional Chinese dietary beliefs that they acquired from their families. For example, one first-generation woman indicated that it was important to consume herbal drinks on a regular basis in

order to stay healthy. She expressed that she learned to make these tonics from her mother and it was her “traditional knowledge”:

...like American ginseng drink, white chrysanthemum tea, golden and silver floral tea (Chinese herbs)... my mother...it's her traditional knowledge...not just these few types of drinks...many other types too... she learned from my (paternal) grandmother (#001, 67 years old)

While many women were committed to honoring traditional beliefs and knowledge, many of the women expressed uncertainty regarding how certain foods affected their recovery from breast cancer and risk of recurrence.

Dietary beliefs

Four common dietary beliefs were identified during the analysis, including: (a) warm and cooked foods are more balanced, (b) growth hormones and antibiotics in animal foods pose cancer risk, (c) acid-alkaline balance, and (d) traditional Chinese health concepts. These beliefs are described in greater detail below with supportive quotes.

4.3.1 Warm and cooked foods are more balanced

Several of the first-generation participants expressed the preference for warm

and cooked food rather than raw food, reflecting the traditional Chinese dietary belief that it is more balanced to consume cooked vegetables instead of raw ones. This belief was not as prominent among second-generation participants in this study. Despite the preference for cooked, warm food, several of the women commented that they would eat raw vegetables and salads during the summer or as a consequence of receiving advice from a dietitian to consume more vegetables:

Chinese are not used to eating raw greens every day. I will eat raw greens when I go out with friends once in a while but I don't usually make green salads at home. I don't eat them raw but blanched it slightly. About adding ginger into stir-fry greens, Chinese believe the ginger can balance the "coldness" of the greens (#004, 73 years old)

and

I think Western ways is about eating raw fruits and vegetables, green salads. However, I don't prefer raw stuff especially when my appetite was not good but hot and warming foods or soups. I would eat raw foods and salads when my appetite was good. I don't resist any ways of healthy eating but just go by what I feel like eating. I think the main difference between the Chinese and Western ways is that Westerners prefer much raw vegetables. Chinese prefer cooked foods, cooked vegetables. (#017, 42 years old)

The comments collected during the focus group session confirmed that the participants were more accustomed to cooked vegetables but were receptive to learning ways to prepare and consume raw vegetables for health promotional purposes.

4.3.2 Growth hormones and antibiotics found in animal foods pose cancer risk

As noted above, some women were concerned about the antibiotics and growth hormones in meat and dairy foods. A number of women believed that the consumption of these foods was linked to cancer while several of them were uncertain. One first-generation woman stated the following when she explained why she avoided eating chickens after diagnosis:

I don't want to have hormones in my diet that might stimulate cancer cell growth... I just want to prevent my cancer from getting worse. (#012, 48 years old).

While another participant was aware of the importance of getting adequate calcium from her diet, she was concerned about the safety of milk given her breast cancer diagnosis because of conflicting information on the Internet:

The confusion comes from... some people have said that milk was not good for

us... they have said many things about milk... that milk contained hormones so I have been drinking in moderation. (#003, 45 years old)

During the focus group session, all women expressed concerns about the safety of consuming meat and dairy. Their comments validated the findings regarding the belief held by Chinese breast cancer patients that animal food contains hormones and antibiotics that may have an adverse effect on their cancer. Several participants also commented that they would buy organic meat when the produce was on sale and when budget allowed.

4.3.3 Acid-alkaline balance

A number of participants reported consuming less meat as a means of “balancing” the pH in their blood, which they perceived could promote health and/or lower their risk of cancer recurrence:

Cancer cells will grow exponentially when our bodies are in acidic condition.

When we eat more meat, our bodies will be in a more acidic condition. I ate less alkaline-forming foods before I got cancer so now I am trying to eat so my body can be in a more alkaline state. (#013, 50 years old)

One participant who had been a vegetarian for the last eight years also revealed that she believed in the acid-alkali balance concept. Following a discussion with

a friend about the perceived acidic nature of white bread, she limited her consumption of bread to that made with white flour:

I didn't know how they learned about this, but because they said flour is acidic so I think eating breads regularly makes our bodies very acidic. (#009, 61 years old).

Some second-generation participants also expressed the belief of balancing acid and alkaline in the diet to promote health. One woman indicated that she consumed less meat after diagnosis in order to maintain bone health:

Less meat, less of that going to take away nutrients from my bones in order to pH balance my blood. (#016, 41 years old)

Almost all focus group participants commented that they consumed less meat, especially red meat post-diagnosis, but did not specify whether this behavioural change was implemented due to the acid-alkali balance concept.

4.3.4 Traditional Chinese health concepts

Many first-generation participants talked about traditional Chinese health concepts, such as ying/yang and hot/cold, consuming certain foods to alleviate certain health conditions during the interviews. They generally believed that

certain foods could either help “destroy” cancer cells or aggravate cancer cell growth, which is a TCM concept known as “Medicine Food Homology” (Hou & Jiang, 2013) with a cultural grounding. A number of them incorporated these concepts into their decision-making process when making food choices:

My daughter tends to feel cold all the time so I will make lamb briskets in soup for her... also “Lo For Tong” [note: “Lo For Tong” is a Traditional Chinese soup prepared with various seasonal vegetables and meat with or without medicinal herbs. Many Cantonese believe that food and TCM share the same origin, a concept known as Medicine Food Homology (MFH) that roots in TCM (Hou & Jiang, 2013). They believe that soups made out of these functional foods help restore bodily functions for optimal health. The recipes and preparation methods have been passed from generation to generation for centuries.

I think these soups are good for our health as lamb soups warm us up, warm up our hands and legs. And so does chicken soup - this is a Chinese tradition (#010, 67 years old)

Some vegetables are of cold-nature, for example mustard greens. It is very cold (nature) so putting in some ginger can help balance the coldness. For water, I always go for water that’s been boiled and I always keep a thermos beside me... always warm or hot water (#006, 46 years old)

The notion of balancing hot and cold energy in one's body to achieve optimal health is embedded in the Chinese culture but most of the participants did not display in-depth knowledge about TCM concepts or dietary therapy in their responses. Nevertheless, many of the first-generation participants described their beliefs, experience and/ or knowledge on making certain traditional soups or avoiding certain foods. Many of them believed that food has direct and immediate effects and/or benefits on their health conditions. For example, one participant commented that she would consume certain foods at certain times to facilitate digestion and promote health:

... We need to drink ginger tea about one to two week prior to Summer Solstice... the ginger drink also has red dates, goji berries, dried Long An fruit and a bit of raw brown sugar in it... this is to keep our gastrointestinal tract warm, which helps with digestion... this is about eating according to the season (#017, 42 years old)

Most women indicated that they learned about TCM and dietary therapy from their family members and/or doctors of TCM. Several women, however, expressed uncertainty about the validity and rationale underlying these dietary beliefs and practices. This confusion was validated by the questions raised by the focus group participants, particularly around the health benefits of consuming traditional Chinese soups. There were four common uncertainties expressed by both study and focus group participants.

Uncertainties

4.3.5 Uncertain about the safety and benefits of certain foods

Many women raised the question about what they should eat or avoid after diagnosis in order to reduce the risk of recurrence. They also raised questions around the safety of consuming certain foods. The three most common foods in question identified were: **dairy, meat and soy** as shown in the following quotes:

About dairy:

*I am not sure but I don't want to take risk by drinking milk so I go for other options
(#010, 67 years old)*

*I know BCCA encourages patients to drink milk but is it really ok for breast cancer
patients to consume more milk and milk products? (#003, 45 years old)*

*I really don't know if milk products are good or not... and I read something like
this on books too saying that cheese and milk products might not be that healthy.
I was thinking maybe the milk produced in North America contained hormones
and stuff... so I have been drinking less milk and eating less cheese (#014, 43
years old)*

About meat:

For example many people said for chickens, they are injected with hormones... they said we should not eat the neck or the wings as some said the hormones were injected on these parts. Some even said legs, so we shouldn't eat these parts. It's so confusing (#004, 73 years old)

I heard many people said chickens raised here usually have been injected with hormones and antibiotics but organic ones are healthier (#017, 42 years old)

About soy:

I have ER-positive breast cancer and I have always wanted to know if I could eat tofu and soy products. I was told that cancer patients should consume plant-based diet, so I really wanted to know. I always thought that tofu was very good for us. I heard that breast cancer patients who are ER-positive should stay away from tofu and soy products. I deliberately did some research on this and found two very diverse opinions, very controversial (#017, 42 years old)

These uncertainties came mostly from conflicting messages they received from various sources and/or not knowing where to get credible information on food and nutrition. They would like to get some credible information about the safety of growth hormone residues and antibiotics in meat and dairy products. Many

women, however, chose to restrict animal protein food and/or consume organic produce despite their uncertainties. Some decided to restrict their diets or select other alternatives either out of fear or as an “insurance” strategy to minimize the risk of recurrence.

Soy is an ethnic food that many Chinese women have been consuming their entire lives. More than half of the participants expressed concerns about the safety of eating tofu and other soy food products after breast cancer diagnosis. One second-generation participant, however, chose to eat tofu despite the conflicting information:

I usually eat once or twice a week in different forms. I love tofu but some people swear no no no tofu. But I think, well, that's fine, as you have to make peace with what you are eating. (#015, 55 years old)

4.3.6 Uncertain about the benefits of consuming organic foods

Many participants raised questions about the health benefits of consuming organic foods. Some believed that they could stay away from ingesting chemicals by consuming organic produce, but a few commented that price was also a determining factor when they purchased organic food. One first-generation woman expressed uncertainty when asked if she believed organic food would make her healthier. She also questioned the authenticity of organic

food:

Not really to make me healthier, but I consciously think that it's good for me. I don't really know. Many people said they are not sure if organic food is authentically organic? (#011, 53 years old)

Another participant would like to obtain calcium from drinking cows' milk but was hesitant to buy organic milk as she found that to be too expensive. She was unsure if it really mattered to buy organic instead of conventional milk and found information around the safety of consuming milk confusing:

They said those milking cows have been injected but I have also watched video clip made in Canada saying that milking cows raised in Canada were not injected with hormones... HSBT...I am not sure what it was and safe to drink...my family and I have been drinking milk in moderation and we won't buy organic milk, as it is too expensive. Yes there's confusion but we also need the calcium to maintain our bone density. (#003, 45 years old)

Many participants would like to know if organic produce is more safe and beneficial for their cancer conditions. These women expressed that they would buy organic produce when they are on sale.

4.3.7 Uncertain about the effects of drinking traditional Chinese soups – “Lo For Tong”

Many Cantonese-speaking participants believed that it was important to consume “Lo For Tong” regularly for health maintenance. However, several had received conflicting messages from healthcare professionals about the effects and/or benefits of drinking these soups after a cancer diagnosis:

I love drinking Lo For Tong, with Wai Shan (note: Chinese yams in Cantonese); I make watercress soup with pork bone, apricot kernels, nuts, dates and boil for two hours. My family doctor has told me not to drink that much Lo For Tong. He has concern about our blood cholesterol and blood sugar health. In the past, I drank homemade Chinese soups every day, as I felt more hydrated after drinking these soups. However, since I received my family doctor’s advice, I was hesitant to drink Lo For Tong every day (#010, 67 years old)

Typically, these traditional soups are prepared by boiling a cocktail of vegetables, nuts, meat with or without traditional Chinese medicinal herbs for two to three hours. Many Chinese believe that by boiling the ingredients for a prolonged period of time, the soup would be more nutritious. However, some participants were uncertain about this belief:

For soup, I don’t make soup everyday... now I prefer soup with less meat. I know

that Chinese believe that "Lo For Tong" should be boiled for a longer time for health benefits but I read some new information saying that these soups are actually not so good for us. We should not boil the soup for more than 3 hours but only for a maximum of 1.5 hours... (#004, 73 years old)

This uncertainty about the benefit of traditional soups was exacerbated by conflicting advice from healthcare professionals:

My family doctor mentioned something about how the meats decomposed in the soup and may not be healthy for us. However, another family doctor told us to drink more Lo For Tong! I noticed that different doctors have different opinions, so for now I will still drink Lo For Tong but not drinking too much (#010, 67 years old)

As a consequence of this conflicting information, several Cantonese-speaking participants reported consuming less traditional Chinese soups.

4.3.8 Uncertain about the safety and benefits of medicinal mushrooms

Several participants took medicinal mushrooms, such as Cordyceps and Reishi, in soup or capsule form after their cancer diagnosis. However, some of them were unsure if it was safe to consume these while they were receiving conventional cancer treatments. In cases of uncertainty, these participants made

choices based on their beliefs, judgments and feelings towards certain foods:

I also worried that it might affect my chemo treatments if I drank too much. I have been drinking this soup once or twice a week. I am not sure if it's really helping me but I have been feeling quite good since I drank Cordyceps mushrooms soup (#017, 43 years old)

A first-generation participant was surprised that her family doctor recommended her to take Reishi mushroom extract after diagnosis. She did not believe that she would benefit from taking the extract and chose not to take it:

I was quite surprised that he, as a Western medical doctor would recommend Reishi mushrooms to me. However, I decided not to take these mushroom extract, as I was skeptical and doubted if they could really help. I don't really believe that a food product can cure cancer. Even pharmaceuticals are not really helping, how could food products cure cancer? (#004, 73 years old)

Interestingly, when this participant attended the focus group nine months later, she shared that she had started taking Reishi mushroom extract after receiving an undesirable mammogram report. Her friends who had cancer also encouraged her to take the extract. She was still uncertain about the effects of this medicinal mushroom extract but decided to take it with the hope that it would improve her cancer condition:

I was quite frightened at that time. Eventually they wanted me to follow up every 6 months, to check on me more frequently. This time I started to take the mushroom pills. Actually, I still don't believe in it but I just let myself to have another chance...maybe... I don't know... Just try to do something different so when my next check up on the mammogram, I hope to see something better.
(#004, 73 years old)

Most participants in this study wanted to get credible and consistent information given by medical health professionals about whether breast cancer patients would benefit from consuming medicinal mushrooms. Some women followed advice from their friends who were cancer survivors and took these mushroom supplements hoping to improve their cancer conditions.

4.4 Theme 4 – Barriers and facilitators to dietary change

The participants in this study experienced various obstacles when attempting to implement dietary changes after their cancer diagnosis, namely (a) family food preference, (b) work-life balance, (c) social eating, (d) taste preference and (e) cost and availability of specialty foods. Some of these “obstacles”, however, also acted as facilitators that promoted healthful eating for several participants.

4.4.1 Family food preference

Most women changed their diet after being diagnosed with cancer. They also attempted to shift their family's diet towards more healthful eating habits while still considering family food preferences. While some family members were supportive towards these shifts, others were resistant to changing their diets and wanted to eat the foods that they were familiar with and preferred, including meat and refined grains.

I would say I am eating more beans and lentils now. I never used to buy or prepare lentil soups or anything but I am doing it now because I don't want to eat so much red meat but I am having a tough time convincing my family. (#018, 45 years old)

Another participant reported that her husband was hesitant to reduce his meat intake because he did not believe there was an association between consumption of meat and cancer risk. While her husband's belief was a barrier to the participant's dietary change behaviour, she tried her best to adhere to her dietary change by cooking separate meals for herself and her family.

The theme of family resistance to dietary change resonated with participants who attended the focus group. For example, two women mentioned that they were trying to consume more brown rice over white rice post-diagnosis but their family

members preferred white rice. As a compromise, they either mixed the two kinds of rice or simply prepared white rice for family dinners.

A few participants indicated during individual interviews that their family members did make some compromises or fully supported their dietary changes. For example, a first-generation participant talked about how her husband supported her by preparing food with her and eating less meat together. In this case, family preference acted as a facilitator for the participant to make dietary changes after her cancer diagnosis:

My husband boiled the soup and we cooked together. My husband and I never really make very oily dishes but we did eat lots of meat. We are eating way less meats now. (#017, 42 years old)

Family context could, thus, be either a barrier or facilitator to dietary change for Chinese women with breast cancer, depending on the degree of family support or resistance.

4.4.2 Work-life balance

Many Chinese women indicated that they consumed less packaged and processed food after their cancer diagnosis because they were aware of the health benefits of having more homemade, whole foods in their diets. However,

many of them juggled numerous tasks in their everyday lives and found it challenging to allocate time for meal planning, grocery shopping and cooking when they wanted to cook “from scratch”. One participant revealed that convenience was the predominant factor that navigated her through her food decision-making process as she had a very busy work schedule. Although she was aware of the importance of implementing a more healthful eating pattern after her cancer diagnosis, she was incapable of maintaining a healthy diet due to her work commitments:

Convenience and health... I know I always will have vegetables but it's got to be convenient. What I considered is efficiency because I work late so I need to find something that I can make very quickly. I think I haven't changed (diet) that significantly. I tried to be cognizant of my choices but the overriding factor is convenience. I just don't have... I wish I had the time. If I could buy my food from somebody who will make everything healthy, I would eat healthy, but it really has to be convenient (#019, 45 years old)

This participant shared that, ultimately, her busy schedule left her with no choice but to switch back to having fast food or take-out foods from cooking meals at home.

In contrast, a second-generation participant stated that she used to have no set time for dinner and consumed much processed food. Since her diagnosis, she

found herself with more time to prepare homemade meals. She did not specify whether she had a change of work schedule or if she intentionally took time off her work after diagnosis. In this case, work-life balance acted as a facilitator towards her dietary change behaviour:

Once I got ill, I had more time to cook so then I actually have more time to experiment and now I have quite a few recipes to make salmon and fish. (#015, 55 years old)

4.4.3 Social eating

Food is the centre of social life in the Chinese culture. When it came to social occasions and celebration of festivities, several participants shared that they selected food based on taste, traditions and meanings rather than health benefits. For example, one participant emphasized the importance of maintaining quality of life through eating the foods she liked with her friends and family during social gatherings for celebrations:

It's not just about feeling full or satisfying our appetite... eating with friends and family is for socializing. Like for Chinese New Year, we would still eat turnip cake with preserved meats, Chinese sausages and dried shrimps. I still eat these with my family and friends and feel very happy. I am happy that I am still able to eat. If I had to totally eliminate these foods from my diet, it would definitely affect my

emotional wellbeing. One would suffer if you were to “take things away” from her!!
(#006, 46 years old)

Social eating could also act as facilitator to some participants. One second-generation woman described the dietary preference among her peer group:

We are getting to that age when we are in our 50s and everybody has some sorts of health issues. They are always talking about, ‘eat this it’s good for you’ and ‘don’t eat that, some are bad for you’. They said mainly to eat more fish, more fruits and veggies, more steaming less deep-frying; less drinking, less sweets that kind of thing (#015, 55 years old)

Similar to family context, social eating may have both a positive or negative influence on dietary change behaviour for Chinese breast cancer patients

4.4.4 Taste preference

Most participants implemented dietary change after their diagnosis, with some increasing their consumption of certain foods that they believed were beneficial for their recovery and/or reduced their risk of recurrence. Taste preference, however, acted as a barrier for some women. For example, one participant mentioned that she consumed more flaxseed oil after diagnosis but was hindered by its unpleasant taste:

This flaxseed thing didn't taste good...tasted awful but you would eat it because you think that it would help you. Or at least I believed it would help me at the time. I stopped eating because it's so bad (laughing). I don't like it... (#007, 57 years old)

A couple of participants shared that they applied the “80-20 rule” when they encountered taste preference as a barrier to making dietary change, in which they would eat well 80% of the time and be allowed less healthy foods the remaining 20% of the time. As one woman remarked:

...20% time, if I eat some potato chips, its ok!” (#015, 55 years old)

Two participants indicated during the interviews that they implemented the “80-20” dietary rule. They also re-iterated during the focus group session that they followed this rule as they were trying to strike a balance among nutrition, taste and quality of life. One woman described that she would eat whatever she wanted on the weekends as a “treat” and would eat more mindfully during the week.

For some participants, taste preference acted as a facilitator. A first-generation woman indicated that she used to love sweets but her taste buds changed after diagnosis, resulting in her consuming fewer desserts.

The major difference between my diet before and after cancer diagnosis was desserts. I used to eat the pastries from [café name] but now I feel that those pastries are too sweet for me. I have been eating less and find the pastries too sweet for me now. (#011, 53 years old)

4.4.5 Cost and availability of specialty foods

Almost half of the participants indicated that they preferred organic produce wherever possible after cancer diagnosis, as they were concerned about the safety of pesticide residues and chemical fertilizers in conventional fruits and vegetables. These women found that the availability of organic produce was quite stable in Vancouver, except for ethnic vegetables, such as Gai Lan (Chinese broccoli) and Chinese long eggplants. The accessibility and convenience of buying organic produce and food items facilitated their consumption, however, some participants found it challenging to purchase organic foods, especially meat products, due to their higher pricing. One participant shared that her organic food choices were highly influenced by her beliefs about nutrition but also by what produce was currently on sale:

Yes pricing and nutrition too. Do you know this grocery store out here on Main and 20th Avenue; it's called Organic Acres. Their stuff is quite pricy but they always have specials, like 2 bunches of organic kale for \$4. The quality of their

produce is always good... just a bit pricy (#011, 53 years old)

Several first and second-generation participants were concerned about the benefits and cost of organic produce. First-generation women were as concerned about whether they should go for organic food as second-generation women were. One second-generation woman shared that she preferred organic chicken to conventional ones but the higher pricing was a barrier to her purchase and consumption:

When it comes to buying organic, it's half and half coz sometimes it's just too expensive I can't afford it. Sometimes Costco has a good deal on organic chicken so I will buy it otherwise I will just use regular chicken (#015, 55 years old)

The high price of specialty food items other than organic food also acted as a barrier to dietary change. One participant indicated that she gained her energy back after surgery from drinking soup made with Cordyceps mushroom and chicken but the high pricing of this specialty food was a barrier to her consumption:

I noticed that the soups were very helpful. I had Cordyceps mushroom soups three days after I had my surgery. I felt very good and regained a lot of strength. I wasn't sure if it was the chicken or the Cordyceps mushrooms that actually helped me. Cordyceps mushrooms are very expensive so I am not able to drink

that everyday... (#017, 43 years old)

4.5 Theme 5 – Information and resource needs

The main sources of information related to food and nutrition for the participants were family, friends, fellow cancer survivors, Internet, social media, an independent integrative medicine clinic specializing in cancer care (<https://www.inspirehealth.ca>), library books, TCM doctors and family physicians. In this study, several Cantonese-speaking participants consulted with TCM doctors and about a quarter of all participants attended nutrition education classes organized by the integrative medicine clinic. A few participants had read the BCCA's Nutrition Guide for Women with Breast Cancer and attended the monthly nutrition class provided, while most of the women did not know about the guidebook.

Coping with Conflicting Messages - In this study, Chinese breast cancer women indicated that the most significant confusion they encountered during their dietary decision-making process was the conflicting messages they received from various sources about the effects of food on breast cancer risk. Some women took advice from family and/or friends and found it frustrating when they were told that they had to avoid many types of food:

So now I look for fishes with scales. I found that this is quite frustrating... seems

like I can't eat anything anymore. I am not sure what to eat so this is frustrating.

(#001, 67 years old)

They proactively searched for information sources to verify the credibility of these messages when they made food choices and when they failed to find credible answers, they would make decisions based on their beliefs, experiences, judgments and feelings:

I won't trust all the info... but will think about the info and use my own judgments.

(#010, 67 years old)

and

For other websites, sometimes I am not sure how reliable that information is so I have to use my own judgments... maybe the suggestions have not been tested or verified. (#017, 42 years old)

First-generation participants generally preferred traditional Chinese culinary practices and most Cantonese-speaking women relied on their beliefs that “food is thy medicine” and that food and TCM shared the same origin when they made dietary choices. This is a concept known as “Medicine Food Homology” that is rooted in TCM dietary therapy concepts (Hou & Jiang, 2013). However, most of them did not display in-depth knowledge on this concept and expressed that they

acquired the concept from their mothers and/or grandmothers:

I love drinking Lo For Tong... with Wai Shan, Fox nuts... I learned this from my mother-in-law. She made Lo For Tong often and I followed her way of making the soups. My friends made these soups too. What else did we make... watercress soup. I make watercress soup with pork bone, apricot kernels nuts, dates and boil for 2 hours. We love to drink these soups... I don't really understand Traditional Chinese Medicine. Like watercress soup... I think it's hydrating... that's what I heard. I think it tastes good and everyone makes this soup at home so I think it's healthy... I don't think we need to look into books; it is our tradition [to make soups] (#010, 67 years old)

This first-generation woman, however received conflicting advice from her two family doctors:

In the past, I drank homemade Chinese soups every day, as I felt more hydrated after drinking these soups. However, since I received my family doctor's advice, I was hesitant to drink Lo For Tong everyday... I noticed that different doctors have different opinions so for now I will still drink Lo For Tong but not drinking too much. (#010, 67 years old)

Many women chose to consume less of the food in question when they received conflicting advice from various sources.

As for second-generation participants, they generally chose Chinese and/or a combination of Asian and Western cuisines but did not believe in or apply traditional Chinese health concept when making food choices. Some of them received dietary advice from their mothers that contradicted their beliefs. Their mothers believed in traditional Chinese health concepts and used food to help their daughters avoid breast cancer. These participants did not believe or did not like their mothers' advice but still followed the instructions in order to avoid family conflict:

Every once in a while she would do some special soups like that. I would drink it but it was gross... Well you have to coz she went through so much trouble and it was expensive and it's supposed to keep you healthy. (#018, 45 years old)

and

She [mother] said ducks are "Duk" (Note: Poisonous in Cantonese)... so for ducks, I was never supposed to eat that again. She also asked me not to eat shellfish although I am still eating shrimps, clams and mussels... she just said some foods are not good for cancer... did I eat ducks? I think I actually did not. I have not eaten it but I don't believe her...I think after a while I will eat it again but I think in front of her I won't eat... just to avoid conflict. No I don't believe it... I don't see there's any reason why I can't eat ducks. (#018, 45years old)

Another second-generation woman reported that her mother told her to stay away from chickens but without giving her a rationale. She did not take her mother's advice:

I love chicken and I could live on chicken all the time. Again traditionally my mum kept saying chicken is not good for you... do not eat chicken. My mum said that chicken is not good for my condition... she learned from friends and people who have gone through [breast cancer] she said chicken is not good for me. She said red meat is not good for me. I asked her what am I supposed to eat and she said pork is supposed to be the best meat for somebody in my condition so she has been cooking pork like crazy for me... (#019, 51years old)

These implied that credible information about the safety of consuming animal foods and the Chinese beliefs on the effects of animal foods on breast cancer need to be developed in order to support Chinese breast cancer patients as well as their family members in making dietary choices.

Almost all women preferred traditional Chinese culinary practices but were very receptive to new information on food choices and cooking techniques. The information needs could be categorized into: (a) Credible information on the effects of certain foods on the risk of cancer recurrence; (b) Culturally relevant information on food and nutrition and (c) Resource needs and means of delivery

of information.

4.5.1 Credible information on the effects of certain foods on the risk of cancer recurrence

Most participants raised a common question: “What should I eat after cancer diagnosis?” They were in need of credible and consistent information around diet and eating:

I really want to ask if there is a special diet that breast cancer patients should follow? Like is there a special dietary pattern for them? Is this important? (#010, 67 years old)

Another first-generation woman chose to refrain from eating altogether for a short time after diagnosis, as she was unable to obtain credible information on the type of food she should eat from her medical health professionals:

Since the day I got diagnosed, I seriously restricted myself from eating. I read on the Internet saying that cancer patients should perform fasting in order to stop supplying nutrients to the cancer cells... I had to stop fasting the second day, as I couldn't stand it... this may not be correct and true but when you are sick, you will try to get as much information as possible in order to help yourself immediately but as you said... a lot of these info are not evidence-based. How come they

can't give us some dietary advice within the first week after our diagnosis? It would be so helpful if they could give us some information on what we should eat because then we could just follow. (#014, 43 years old)

Participants also raised many questions regarding the safety of specific foods, compounds in foods, or types of diet on breast cancer risk (see Table 4.2). Many of them asked if the BCCA could provide some legitimate information around the safety and effects of these foods or diets.

Table 4.2 Topics requiring credible information by participants

Food/ Diet	Compounds/ effects of concern
(a) Dairy products	Growth hormones and antibiotics
(b) Organic foods	Health benefits of consuming organic foods and effects of chemical fertilizers and pesticides in conventional produce on breast cancer
(c) Preserved/ethnic foods	Preservatives and additives
(d) Soy products	Effects of phytoestrogens on breast cancer
(e) Medicinal mushrooms e.g. Cordyceps, Reishi, Yunzhi mushrooms	Health benefits and safety of consuming medicinal mushrooms

(f) Acid-alkaline balance diet	Health benefits of implementing such diet
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4.5.2 Culturally relevant information on food and nutrition throughout the cancer care trajectory

Culturally relevant information refers to traditional Chinese dietary beliefs and culinary practices. The belief “food is thy medicine” means that food and TCM shared the same origin is a concept known as “Medicine Food Homology” that roots in TCM dietary therapy concepts (Hou & Jiang, 2013). Participants in this study responded that they required different types culturally relevant diet-related information at different stages of their cancer trajectory. Some women were still on active chemotherapy treatment at the time when the interviews were conducted while others had moved into survivorship and were focused on recovery and secondary prevention. The women receiving active cancer treatments generally felt weak and some experienced difficulty eating, including nausea and vomiting. They expressed the need for food and nutrition information to help plan their meals, cope with the symptoms associated with cancer treatments, and regain their energy at this stage. Women who were in the recovery phase indicated they would like to learn about food and nutrition to help reduce the risk of cancer recurrence and promote overall health.

One first-generation participant who was in the midst of receiving chemotherapy treatments described how she browsed the Internet, approached her surgeon, oncologist, and dietitian, as well as contacted HealthLink BC (<http://www.healthlinkbc.ca>), all in an attempt to sort through the conflicting information she had received about Reishi mushrooms and soy products from other sources:

I have also browsed the Hong Kong Cancer Foundation website and it stated clearly that cancer patients should stay away from Reishi mushrooms while they are receiving chemotherapy treatments. However, I also read that many celebrities in Hong Kong took Reishi mushrooms while they were on treatments... they were talking about applying both Chinese and Western ways to treat cancer so I am quite puzzled about this and really want to get an answer on this. I wanted to read info about food and nutrition specifically designed for Chinese patients. My biggest question is: what can I eat? (#017, 42 years old)

For example, she found that a soup made out of medicinal mushrooms helped her regain her strength during treatments but was unsure if it was safe and wanted to know where to get credible information in Vancouver.

A few participants attended the monthly nutrition class held at BCCA and read the BCCA's Nutrition Guide for Women Living with Breast Cancer booklet (BC Cancer Agency & HealthLink BC, 2011). They commented that the information

was helpful and easy to understand. Most of the first-generation women would have liked to learn more about healthful eating, preferably with ingredients and preparation methods that they were familiar with. One first-generation woman made the following comments about the BCCA Nutrition Guide:

This booklet was good but all the ingredients listed were based on Western diet, beans, hummus...not commonly consumed by Chinese and not usually found in our diet. It would be helpful to use this booklet as the basis and modify, to develop a booklet that talks about Chinese ethnic food, Chinese cooking methods and recipes, the seasonings, spices. In this pink booklet, it talks about the health benefits of eating more beans and how one can prepare beans but the condiments used are more Western style. But how about having some suggestions on Chinese ways of preparing the beans? (#005, 50 years old)

4.5.3 Resource needs and means of delivery of information by BC Cancer Agency

More than half of the study participants did not know about the BCCA's Nutrition Guide for Women Living with Breast Cancer booklet (BC Cancer Agency & HealthLink BC, 2011) and were unaware of the monthly nutrition class delivered by a registered dietitian in English at the BCCA. Most of the first-generation women expressed interest in attending nutrition class/seminars hosted by registered dietitians who were familiar with the dietary practices of Chinese

patients. They also preferred classes to be conducted in Cantonese and/or Mandarin. A number of Mandarin-speaking women preferred Mandarin or English since they could not understand Cantonese.

Most second-generation women indicated that current resources on nutrition education and food-related information were generally adequate for them. One participant, however, pointed out the need for developing additional culturally relevant resources for first-generation Chinese breast cancer patients:

I don't know if there's anything you need to gear towards second-generation Chinese people as supposed to... I think more for first generation 'cause I find that a lot of the dietitians' talks, they don't take into consideration Chinese diet... it's all talking about things that Chinese people, first generation Chinese won't eat. You trying to make them eat kale smoothies? They are not going to do it, right? (#018, 45 years old)

Another first-generation woman hoped to see some collaboration between conventional cancer care and TCM:

I think BCCA may consider learning more about how TCM views and treats cancer... like maybe look into how doctors in China combine TCM with conventional therapies to treat cancers and how they combine Chinese and Western ways of eating to support cancer patients. I think this will benefit not

only Chinese patients but patients from other ethnic groups too... I think BCCA physicians may try to understand more about the dietary beliefs, dietary practices of Chinese people and the benefits of applying TCM... maybe they didn't have much opportunities to understand these. (#017, 42 years old)

Another first-generation participant who has been residing in Vancouver for over 40 years expressed her desire to attend group activities, such as cooking classes, to learn about food choices and preparation methods more relevant to Chinese:

I think I would prefer in person... when you are in a group, you also interact with other people and you hear what they are going through so you learn from each other how you cope with the situation... cooking class, for example I hope they could teach us what kind of soups we can make at home... maybe have a shopping trip at the grocery store... they do that at Choices but maybe a tour more oriented to Chinese... like if they can tell us what kind of soup is hydrating and good for us (#011, 53 years old)

Besides culturally relevant information, some participants expressed interest in learning about different approaches when making food choices. One of the approaches was the “whole food” approach (i.e. to cook with unprocessed and fresh ingredients). A quarter of all participants mentioned that they had signed up and received electronic newsletters and/or attended nutrition/cooking classes

organized by the local integrative medicine clinic. The participants enjoyed learning about the whole food approach introduced by this clinic. One woman shared:

I joined the [clinic name] in the beginning and I met with a nutritionist there and they have some cooking classes, very eye opening and delicious and you can do it! (#015, 55 years old)

Besides the whole food approach, some first-generation participants revealed that they followed the traditional Chinese health concepts when making dietary choices. Although most participants did not demonstrate in-depth knowledge of these concepts, they believed that TCM provided more personalized recommendations with regards to the role of diet in the context of cancer and would like to see some collaboration between conventional cancer care and TCM practitioners to provide consistent and culturally relevant information on diet and nutrition for Chinese patients:

Food, diet and nutrition is an important part of TCM, for example TCM would look into the specific foods that a cancer patient should eat more to help recovery according to his or her body type and condition. Diet is personalized and specific especially for those with illnesses. On the contrary I don't see the conventional medicine is doing much about diet, it is too generalized... I think BCCA physicians may try to understand more about the dietary beliefs, dietary practices of Chinese

people and the benefits of applying TCM. (#017, 42 years old)

As for means of delivery, most first-generation Chinese women expressed the need for a website and booklet from the BCCA that provided nutrition-related information in the Chinese language and/or traditional Chinese characters. They were also interested in attending seminars and cooking classes given in Cantonese and Mandarin by healthcare professionals who were familiar with the Chinese diet.

Chapter 5: Discussion

This study aimed to explore to how Chinese women living with breast cancer in Vancouver make dietary choices and to understand the information needs of this growing population around diet and nutrition. In this study, both first and second-generation participants were found to make dietary changes by consuming more fruits, vegetables, organic food and traditional Chinese food while decreasing intake of animal proteins, soy and processed foods post-diagnosis. Almost all participants raised questions about the effects of certain foods on their cancer and risk for recurrence. Many first generation participants in this study mentioned traditional and cultural perspectives when making food choices and most Cantonese-speaking women did implement these beliefs when making food choices. The sample of this study was a heterogeneous group with diverse characteristics in terms of dietary beliefs and choices, information-seeking behaviour and information needs. In this section, the findings generated will be summarized and discussed according to the five main research questions raised during the initial stage of this study.

5.1 Dietary beliefs and practices

Similar to the behaviour adopted by women diagnosed with breast cancer in the general population (Salminen et al., 2000; Adams & Glanville, 2005), almost all the Chinese Canadian women in this study implemented dietary change post-

breast cancer diagnosis for various reasons, as they believed that diet was linked to cancer risk. Other research has shown that women with breast cancer used food to gain a sense of control and hope, and that their food choices were shaped by their perceptions of the role of food in cancer causation (Adams & Glanville, 2005). Almost all participants in this study believed that certain foods had curative values or could exert immediate adverse effects on their health.

The main findings of this study showed that prior to being diagnosed with cancer, most Chinese women chose food based on convenience, taste and family preference. However, their preferences and concerns changed following their diagnosis. These changes included a reduction in the intake of red meat, processed and deep-fried foods and an increase in the consumption of fruits, vegetables and organic foods. These changes in dietary behaviour are consistent with findings reported by previous studies performed with other women with breast cancer (Salminen et al. 2000; Beagan & Chapman, 2004). During the initial stage of their cancer trajectories, some first-generation Chinese women preferred traditional foods, such as congee, noodle soup and traditional Chinese soups, as these foods brought them comfort. This included a number of first-generation participants who migrated to Vancouver at an early age. These women have resided in Vancouver for a long time and might have been acculturated. However, they preferred traditional foods when they were sick. The implication of this is that first-generation Chinese women living with breast cancer in Vancouver may need culturally relevant information around food and

nutrition to support their dietary decision-making when they are going through active cancer treatments, regardless of the degree of acculturation.

In this study, many Chinese women living with breast cancer believed that certain foods could destroy cancer cells and support recovery. For example, some of them consumed medicinal mushrooms, such as Cordyceps, Reishi and Cloud mushrooms in soup or supplementation form. These mushrooms have been recognized in the Chinese culture and used as part of TCM for their health-promoting and anti-cancer properties for generations (Ying et al., 1987; Sullivan et al., 2006). Nowadays, Chinese originating in different regions still share a common affinity to TCM, such as these medicinal mushrooms and consider them to be an effective complement to Western conventional medicine in the case of illnesses (Chung et al., 2012).

5.2 Dietary decision-making

(a) Making dietary choices

When making food choices, almost all participants raised questions and expressed concerns around the safety of specific foods on their cancer condition. When these women encountered conflicting information around food and nutrition, they would make food choices based on their own judgments.

One ethnographic study investigating the perceptions of food and eating among Chinese cancer patients in B.C. (Bell, Lee & Ristovski-Slijepcevic, 2009) reported that the participants encountered difficulties when making dietary choices. Participants in the study stated that they were confused by the differences between Western and Chinese ways of eating. In this study, Chinese women living with breast cancer indicated that the confusion actually came from overwhelming and conflicting information on the effects of certain foods on the risk of recurrence from various sources. This finding has extended those of the Bell et al., (2009) study by specifying the actual difficulties faced by Chinese breast cancer patients living in Vancouver. This implied that evidence-based, consistent and culturally relevant information around food and nutrition was in demand to support this population. Similar to findings from a study examining the dietary information needs of breast cancer survivors from New Brunswick (Adams & Glanville, 2005), Chinese women in Vancouver also trusted their healthcare professionals for nutrition-related information. However, additional in-depth investigation also revealed that when these women received conflicting messages on the safety of certain foods, they chose to stay away from any food that they were uncertain of as an “insurance” strategy due to their uncertainties and fears.

Several participants indicated that they followed advice from family and/or friends to stay away from certain foods that they loved while a small number of them followed the “80-20” rule as suggested by registered dietitians at BCCA. Several

participants described this rule as an eating pattern, which they would consume foods that they thought were healthy 80% of the time and for the remaining 20% of the time, they would eat foods that they loved but were not necessarily healthy. A number of first and second-generation women expressed that they experienced less stress and could “make peace” with what they ate when they implemented the 80-20 rule. This eating pattern might have helped these women to balance their food preference with cultural choices and quality of life. No previous study has examined or reported this dietary rule among other breast cancer patients.

(b) Information-seeking process

Both first and second-generation Chinese Canadian women in this study were high information seekers as they raised many questions around the effects and/or benefits of certain foods, supplements and TCM. However, a study conducted with Chinese breast cancer patients on their information-seeking behaviour indicated that these patients would not keep searching for answers to their questions around food and diet, even when they encountered uncertainties (Simpson, 2003a). One explanation from this earlier study was that healthcare professionals were culturally viewed as authoritative figures in Chinese culture (Simpson, 2003a) and Chinese patients were hesitant or even afraid to ask questions related to their health as they felt that doctors were unwilling to discuss diet related matters after diagnosis with them. This implies that healthcare professionals should be made aware of the cultural preference of Chinese breast

cancer patients in relation to diet and TCM therapies. In contrast, the findings of this study showed that Chinese women living with breast cancer in Vancouver were relatively more proactive in seeking diet-related information. This could be attributed to the higher levels of educational background of the participants recruited in this study and a culture shift over time, with women having more access to diet-related information from various sources. Most of the women have completed post-secondary education and a number of them were professionals. Most participants were willing and capable of communicating with healthcare professionals about diet and breast cancer. Therefore, it would be helpful for healthcare providers, especially registered dietitians and TCM doctors to encourage Chinese cancer patients to raise questions they may have around diet, TCM and dietary therapy in order to facilitate communication.

A number of women consumed TCM in decoction and/or capsule form during active cancer treatment phase. They received information on TCM in cancer care either through consultation with doctors of TCM, their family members who were TCM practitioners or from books on TCM. A number of them reported using TCM for other health conditions prior to their breast cancer diagnosis and their positive experience encouraged them to take TCM for their cancer condition. Most of them expressed that they did not inform their conventional health professionals about their use of TCM. This behaviour resonated with the findings of an earlier study exploring the perspectives of TCM in cancer care among patients in China (Xu et al., 2006). Several participants in this study explained that oncologists and

other health professionals did not understand TCM and might ask them to stop using it. This also echoed the findings generated from the previous study (Xu et al., 2006).

(c) Perception of current resources

More than half of the Chinese women in this study reported that they had not received the Nutrition Guide for Women Living with Breast Cancer booklet (BC Cancer Agency & HealthLink BC, 2011) and were not aware of the monthly nutrition class held at the BCCA. A few of the participants who attended the class found it helpful but would like to see credible information on the effects of certain foods on breast cancer as listed in Table 4.2 and culturally relevant food ideas given by the registered dietitians. Currently, the diet-related information provided by BCCA does not reflect Chinese culture. No study has been conducted to evaluate how helpful current classes, booklet and website are to Chinese women living with breast cancer in Vancouver in terms of language, content and timing.

(d) Influencing factors

The main factors that influenced dietary decision-making of Chinese women living with breast cancer were: traditional beliefs and practices, family and friends (especially those who were cancer survivors), media and information on the Internet.

Traditional beliefs and practices - The general belief that all foods have either hot or cold properties is very common among Chinese. Previous studies (Simpson, 2003a; Bell, Lee & Ristovski-Slijepcevic, 2009) reported that Chinese cancer patients considered the hot-cold balance concept when making dietary choices and preparing food. A study performed with Chinese Americans living in California also reported this belief and consideration when they made food choices (Lee & Shen, 2008). In Canada, dietary practices based on traditional Chinese health beliefs such as balancing hot and cold foods for health promotion were also found to be prevalent among Chinese Canadians in Toronto (Kwok et al., 2009). However, our study findings indicated that while many first-generation participants described the nature of certain foods as “cold”, “warm”, “poisonous”, or “damp” in nature and mentioned TCM dietary therapy concepts, they did not actually display in-depth knowledge but had many uncertainties around the application of dietary therapy to support the recovery of breast cancer. Many Chinese women in this study made decisions about using or avoiding certain foods to promote healing based on Medicine Food Homology concept rooted in TCM philosophy (Hou & Jiang, 2013). This was reflected by the lay application of TCM terms they used when they described the nature of certain foods. For example, a number of participants in this study described certain foods as “Duk”, which was a lay term generally used in TCM to describe the inflammatory effects of certain foods, such as ducks and shelled seafood. This finding reflects the common belief in Chinese culture that certain foods “cause” illnesses while other foods can help “fight” them (Koo, 1984; Mok & Martinson, 2000). The application

of this belief to food choices has been found in other studies of Chinese cancer patients (Chung et al., 2012). Although such beliefs and practices have been passed from generation to generation, most of the women in this study were uncertain about the effects of these “inflammatory” foods on their breast conditions and restricted their diets anyway as an “insurance” strategy in order to reduce the risk of recurrence of cancer.

In cases of uncertainty, some women chose to restrict their diets according to their beliefs (Bell, Lee & Ristovski-Slijepcevic, 2009) while others used their own judgments when making food choices. For example, over half of them would avoid shelled seafood, roasted ducks and red meat in their diet, as they believed that these foods exerted adverse effects on their cancer conditions. Their responses regarding the consideration and practices of traditional dietary beliefs verified that they had strong adherence to their cultural practices in using food and/or avoiding foods to heal or treat symptoms, similar to what has been observed in other studies (Ludman, Newman & Lynn, 1989). On the other hand, a number of the second-generation women mentioned that they did not actually follow traditional Chinese dietary beliefs and practices when making dietary choices but would take suggestions from their mothers only for the purpose of avoiding family conflicts.

Most Cantonese speaking and a number of second-generation participants in this study described that they had learned to make traditional Chinese herbal soups

and tonics from their families at a young age and believed that consumption of these traditional foods was important for promoting health. This resonated with previous findings that the practice of consuming certain foods for the prevention of health ailments was prominent in the Chinese culture (Simpson, 2003), especially among Cantonese-speaking patients. It is noteworthy that all second-generation participants in this study were born to Cantonese-speaking parents, who migrated to Vancouver between 1940 and 1970. Cantonese-speaking Chinese originated mostly in the Southern part of China, including Hong Kong. In this study, it was found that the practice of making and consuming certain traditional Chinese soups during certain seasons to cope with specific health ailments were more prominent among Cantonese speaking and second-generation participants. This finding also substantiated the result generated by the Bell et al. study (2009) that the beliefs and practices of using food to heal were embedded in the Cantonese culture. This implies that Cantonese-speaking women living with breast cancer may require credible and consistent information on the safety and benefits of consuming traditional Chinese soups after cancer diagnosis.

Family and friends, media and the Internet – Most Chinese women in this study took advice from family members and friends, especially those who were cancer survivors, when making food choices. They also obtained information from other sources, such as acquaintances, the Internet and the media. A common food that most of the participants consumed despite having uncertainties was medicinal

mushrooms, including Cordyceps, Reishi and Cloud mushrooms. These mushrooms have been recognized for their health-promoting properties (Sullivan, 2006) and anti-cancer activity (Ying et al., 1987) in the Chinese culture and used in TCM. Medicinal mushrooms have also been produced in supplementation form and marketed for cancer patients. A number of these health product companies employed Asian celebrities to promote these supplements. Many participants indicated that they took these medicinal supplements based on the advice from friends and/or media reports. A few women found these medicinal mushrooms helped them regain energy post-chemotherapy treatments while others expressed uncertainties about the effects of these mushrooms but still took them out of hope.

Family preference was also found to be one of the main factors influencing dietary change among Chinese Canadian women living with breast cancer. This applied to both first and second-generation participants, as well as Cantonese and Mandarin speaking women in this study. An earlier study indicated that there was a “self-sacrificing” role in the family among women living with breast cancer (Beagan & Chapman, 2004), which included Chinese women (Simpson, 2003; Kwok & White, 2011). This holds true even in the case of illness that women would still consider the needs and preference of their family members first in terms of making dietary choices and planning meals (Beagan & Chapman, 2004). However, half of the Chinese women in this study reported implementing dietary change for the entire family instead of sacrificing their own dietary needs.

For Chinese women, the desire to fulfill the needs of family members is deeply rooted in the Chinese culture. This study revealed that Chinese women emphasized the importance of preparing foods that family members preferred as family is seen as the fundamental unit rather than individuals in Chinese culture (Wright et al., 1996). Culturally relevant nutrition education programs tailored for Chinese breast cancer patients and their families might facilitate communication among family members and assist them in making informed food choices as well as meeting the needs of their families.

5.3 Information and resource needs

Both first and second-generation participants expressed the need for evidence-based information from the BCCA regarding the safety of certain food compounds and diet types (Table 4.2) in the context of breast cancer and cancer treatment. These foods included animal proteins, soy, sugars, medicinal mushrooms and organic foods. In addition, participants at various stages of the cancer trajectory demanded different information to support them in making food choices. For example, women who were going through active cancer treatments needed culturally relevant food ideas to help them cope with symptoms, such as nausea and vomiting. On the other hand, women who have completed treatments and were in recovery phase looked for culturally relevant food ideas and eating patterns that could help them lower the risk of recurrence. Many of them

expressed the need to learn about cooking with unprocessed ingredients (cooking from “scratch”) and were receptive to experiment new ingredients in their diets.

Studies conducted with breast cancer patients in other countries, including China, have identified the need for culturally sensitive and linguistically appropriate information resources on food and dietary change (Kwok & White, 2011; Lee et al., 2013; Leng et al., 2012; Leng et al., 2014, Simpson, 2003). However, previous studies with Chinese cancer patients regarding their dietary choices and perceptions of food had not identified the differences in terms of dietary beliefs, practices and information needs of Chinese patients originating in different regions of Asia. The Chinese population in Vancouver is a heterogeneous group as immigrants originating in different geographical regions are linguistically and culturally diverse. According to Census 2011, Statistics Canada, the percentages of total population in Vancouver, B.C. that speak Cantonese, Mandarin and Chinese-not-specified dialect were 5.8%, 4% and 5%, respectively (Figure 2.1). Mandarin speaking migrants primarily originate in Mainland China and Taiwan and do not share the same dietary practices with their Cantonese-speaking counterparts (Ma, 2015). In this study, almost all Cantonese-speaking women described their beliefs and experiences in consuming traditional Chinese soups and herbal decoctions for maintaining health. When compared to their Mandarin-speaking counterparts, Cantonese-speaking women and almost half of the second-generation participants used lay TCM terms to describe the nature of

certain foods. On the other hand, Mandarin-speaking participants did not mention TCM concepts or were not familiar with the practice of consuming traditional soups. More in-depth studies are needed to investigate the use and information needs related to TCM, the herbal decoctions, traditional soups and dietary therapy among Chinese cancer patients.

As for second-generation participants in this study, all of them were born to Cantonese-speaking parents. They generally did not hold similar traditional dietary beliefs but learned some TCM concepts and the practice of consuming traditional soups and herbal decoctions for health maintenance from their mothers. They consumed the soups despite uncertainties around the concepts as a token of appreciation for the effort their mothers put in while preparing the soups. This resonated with the findings from previous studies on the meanings of food in the Chinese culture. Food was often used to express love and care, especially among family members (Wright, Watson & Bell, 1996). When a family member was diagnosed with cancer, other members often expressed their care and emotions with foods, such as traditional Chinese soups rather than words (Simpson, 2003). However, the non-credible dietary advice given by the family members confused patients. They would consume these soups and decoctions even they did not like their taste and avoided eating certain foods in front of their families because they wanted to adhere to family/cultural traditions, showed appreciation and avoid family conflicts. Resources are needed to support families of Chinese women living with breast cancer in addressing dietary beliefs

and preferences to avoid conflicts.

This study showed that these cultural meanings of food and the practice of using food to express care and emotions rang true in the families of both first and second-generation Chinese Canadian women. This implies that nutrition supportive services should be delivered to both patients and their families as Chinese use food to express care for each other and they focus on family preference when planning meals as a group.

5.4 Strengths and limitations of this study

Several techniques were implemented to ensure the credibility of the findings and interpretations for this study. There was only one lead researcher who conducted all research activities in order to keep the study procedures consistent, including recruitment of participants, interviews, transcription, translation, coding and thematic analysis. An audit trail was kept throughout the research process to yield a defensible line of analytic logic (Thorne, 2008). The trail included notes taken during interviews and the coding process and the development of the interpretive schema and major themes. To enhance rigour, the lead researcher crosschecked the codes and themes with her co-supervisors from time to time, during the course of the study. The purpose of performing crosschecking periodically was to reduce bias, prevent the researcher from injecting anecdotal ideas especially during the coding and analysis stages of the study in order to

enhance the interpretive authority of the findings (Thorne, 2008).

In addition, this study used semi-structured interviews followed by a focus group to explore the dietary choices made by Chinese Canadian women living with breast cancer in Vancouver. The integration of the two methods allowed the emergence and validation of the main characteristics of the phenomenon across all data collecting processes, which generated accountable and defensible findings (Lambert & Loiselle, 2008).

Further, the study sample was diverse in characteristics, which enabled the researcher to maximize variation and capture a variety of descriptions of the dietary decision-making process of a typical Chinese cancer population in Vancouver. In addition, the data saturation approach was employed when recruiting participants for this study. The researcher kept recruiting participants and collecting data until no new findings were obtained (Bowen, 2008; O'Reilly & Parker, 2012), meaning that saturation was reached on major themes to achieve representative credibility (Thorne, 2008).

The focus group allowed the researcher to validate the findings and capture any emergent themes. However, only six first-generation Chinese Canadian women attended the session, which was a shortcoming for this study because the data collected during the session did not include validation from the second-generation participants.

Another limitation to this study was the transferability of the findings. The inclusion criteria of this study yielded study findings that represented only first and second-generation English, Cantonese and Mandarin-speaking Chinese Canadian women diagnosed with breast cancer within the last five years in Vancouver. As a result, the data has limited its transferability by not reflecting the perspectives and information needs of women who were diagnosed with breast cancer beyond the last five years and those who speak other Chinese dialects in Vancouver. However, the findings can be transferred to other Western countries, which also have large number of Cantonese and Mandarin speaking Chinese women diagnosed with breast cancer within the last five years.

This study did not conduct an in-depth investigation about the effects of socioeconomic factors, such as household income, types of breast cancer (Estrogen-receptor positive or negative) and level of stress on dietary choices among the participants. Future research exploring the effects of these parameters on dietary choices among Chinese women living with breast cancer may add value to the development of specific resources in order to meet the needs of this population.

Qualitative studies such as this one do not intend to examine the central tendency of a large population but aim for an in-depth understanding of the opinions of specific and smaller groups with most relevant characteristics to the

topic being scrutinized to ensure the interpretive authority and relevance of the findings (Lubrosky, 1995; Palyps, 2008; Thorne, 2008).

Chapter 6: Conclusion

Similar to other women living with breast cancer in the general population, Chinese women living with breast cancer in Vancouver in this study implemented dietary change at various degrees after diagnosis. Most of them obtained diet-related information from their families, friends, the Internet, and media. With easier access to diet and nutrition-related information from various sources, Chinese women living with breast cancer encountered much conflicting information about the kinds of food and types of diet they should consume post-diagnosis in order to reduce the risk of cancer recurrence. Uncertainties around the effects of food on their cancer condition created the greatest anxiety for these women. Family preference and overall health of family members were the major considerations these women thought about when preparing meals at home.

There were differences in terms of dietary beliefs, practices and information needs among the diverse group of women who participated in this study. First-generation women expressed a desire for more culturally relevant food ideas and consultations with dietitians who are familiar with the Chinese diet. Cantonese-speaking women practised dietary therapy informed by TCM concepts despite their limited TCM knowledge. Second-generation women found the current resources available at the cancer agency helpful but wanted to learn about different dietary approaches, including the whole-food approach. Almost all study participants were high information seekers. They wanted credible and consistent

information about the kinds of food and types of diet they should consume in order to reduce the risk of recurrence and improve their overall wellbeing.

6.1 Implications for clinical practice

This study explored the dietary beliefs, practices, decision-making process and diet-related information and resource needs of Chinese women living with breast cancer in Vancouver. The findings suggested several implications for clinical dietetic practice to support these women and their families in making dietary choices post-diagnosis.

Culturally and linguistically relevant resources for first-generation Chinese Canadian women living with breast cancer – almost all first-generation participants wanted to consult with healthcare professionals who were familiar with the Chinese diet and could provide dietary advice specific to their stage in the cancer trajectory. It is important for conventional health professionals to be aware of the traditional health beliefs and dietary preferences of these patients' especially first-generation Chinese women. These include the preference for cooked/ warm foods over raw/ cold foods; regular consumption of traditional Chinese soups for health maintenance; beliefs and uncertainties on the effects of medicinal mushrooms on breast cancer conditions and concerns about the safety of consuming animal foods and risk of recurrence of cancer. Besides dietary preferences, there is also a tradition of “self-help” by using dietary therapy and

TCM to complement conventional cancer treatments among Chinese patients. For safety and communication purposes, conventional healthcare providers should make an effort in understanding the practices of applying dietary therapy and consumption of TCM among these patients.

In addition, patient education resources focusing on searching and evaluating diet-related information coming from the media and the Internet would benefit these patients. Many participants reported that they were uncertain about the credibility of diet-related information coming from various sources. Some of them described their dietary decision-making experience as “confusing” and “frustrating” due to the overwhelming and conflicting information they retrieved from the Internet, the media, family and friends. .

A few of the Chinese women in this study mentioned that they implemented the “80-20” dietary rule, which they acquired from registered dietitians at BCCA. The participants described that, under this rule, they consumed foods that they thought were healthy 80% of the time and foods that they loved but were not necessarily healthy (or they called them “treats”) 20% of the time. There was no information pertaining to this rule found in the current BCCA dietary resources and no scientific literature was found to support this rule. Further research and clarification on the definition and effects of this eating pattern would be helpful to support breast cancer patients of all ethnicities in making food choices.

As for language, Cantonese speaking patients, who mostly originated in Hong Kong, preferred resources disseminated in Cantonese and traditional Chinese characters. Mandarin speaking patients who originated in Taiwan also preferred traditional Chinese characters for written materials, such as websites and booklets. For all Mandarin speaking patients, many of them indicated that they could not understand Cantonese so they preferred Mandarin or English. Women who originated in Mainland China preferred simplified Chinese characters for written resources.

Content of program and resources – Almost all participants indicated that they had consumed less animal food products, especially red meat, and increased their intake of fruits, vegetables and organic foods. Therefore, educational resources focussing on plant-based diet/vegetarianism would inform and guide these patients to consume a more balanced diet. In addition, more culturally relevant food ideas consisting of warm/cooked foods, traditional Chinese soups, ethnic foods and food preparation methods for patients at various stages of the cancer trajectory would benefit both patients and their families. It is also important to address family dietary preference and involve family members in education due to the tendency of women to privilege the family over their individual needs.

Besides food ideas, findings of this study showed that most participants would like to obtain credible and consistent information on the safety and/or effects of

soy, dairy, meat, sugars, medicinal mushrooms and acid-alkaline balance diet on their cancer conditions by means of a booklet, website and/or classes.

6.2 Implications for future research

Many Chinese use TCM and dietary therapy to complement conventional medical treatments in cases of illness, including cancer (Koo, 1984; Leng & Gany, 2014; Simpson, 2003a; Wang, Windsor & Yates, 2012). In this study, it was also found that most Chinese women, especially Cantonese-speaking participants, also incorporated traditional dietary practices when preparing their meals after they learned about their breast cancer diagnosis. The value of adding dietary therapy based on TCM concepts to conventional cancer care among Chinese breast cancer patients in Vancouver should be investigated. A study conducted in San Francisco (Lu et al., 2014) showed that a 10-week intervention program delivered through peer mentoring to provide culturally relevant information was associated with reduced depressive and anxiety symptoms among Chinese American breast cancer patients. The program delivered information pertaining to cancer treatment options, diet and TCM for Chinese American women living with breast cancer. The goal of the program was to support the dietary decision-making process of Chinese women living with breast cancer, who held culturally distinctive views on food and eating. At present, there is no such collaborative program offered nationally in Canada. Therefore, it would help meet the needs of this growing population to explore the feasibility of developing a similar program

or resource for Chinese breast cancer patients in Vancouver.

In addition, more in-depth studies are needed to explore the practices and specific information needs related to dietary therapy grounded in TCM concepts for Chinese breast cancer patients. It is important to inform conventional healthcare professionals about the practice of using dietary therapy, traditional Chinese soups and TCM decoctions among Chinese breast cancer patients in Vancouver to complement conventional cancer treatments for safety reasons and to improve the quality of cancer care.

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Appendices

Appendix A Poster for recruiting study participants. English and Traditional Chinese versions

BC Cancer Agency December 2014

Research Study: “Exploring the Dietary Choices of Chinese Women Living with Breast Cancer in British Columbia”



Principal Investigator: Dr. Ryna Levy-Milne RD PhD
Co-investigators: Dr. Gwen Chapman RD PhD and Dr. Lynda Balneaves RN PhD

About this study: We are trying to understand how Chinese women living with breast cancer make dietary choices and the nutritional information/ support they need for making food choices for the prevention of cancer recurrence.

Who is eligible? First or second-generation Chinese Canadian women diagnosed with breast cancer within the last two years. Can be English or Cantonese or Mandarin speaking.

Participation: You will be invited to participate in a one-hour long interview and a one-hour long focus group session when all interviews are completed.

Honorarium: You will receive a \$20 honorarium in the form of a gift card to compensate your time for participating.

Significance: The findings of this study can help in the development of culturally specific resources/ supportive programs provincially.

**Interested? Please contact the main investigator:
Ms. Brenda Ng at xxxxxx or email: xxxxxx**



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BC Cancer Agency
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An agency of the Provincial Health Services Authority

研究項目： “探討卑詩省華裔乳癌女病人選擇飲食的方法及經驗”



首席研究員: Ryna Levy-Milne 博士 RD PhD

副研究員: Gwen Chapman 博士 RD PhD and Lynda Balneaves 博士 RN PhD

關於這項研究: 我們希望深入了解華裔乳癌病人在日常飲食中選擇及預備食物的經驗和方法及探討在選擇食物時所需要的食物種類及營養資料。如果你願意參與這項研究, 你所提供的資料將有助卑詩癌症局去發展一些針對華裔乳癌病人所需要的支援服務。

誰可以參與? 如果你是第一或第二代華裔加拿大人及曾在過去兩年內被診斷出乳癌的女性並且能說廣東話, 國語或英語, 均有機會參與此研究。

參與形式: 你會被邀請參與一個若一小時的會面訪問。當所有會面訪問完成後, 你會被邀請參加一個若一小時的小組研討會。

報酬: 當會面訪問結束後, 你將會收到\$20 加元的超級市場現金購物咭, 以補償你參加會面訪問付出的時間。

研究的重要性: 如果你願意參與這項研究, 你所提供的資料將有助卑詩癌症局去發展一些針對華裔乳癌病人所需要的健康飲食及營養教育的支援服務。

你對這項研究有興趣? 請聯絡研究員吳小姐 (Ms. Brenda Ng)

電話: xxxxxx 你亦可以發電郵至xxxxxx



BC Cancer Agency
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An agency of the Provincial Health Services Authority

Appendix B “Invitation to Study” card for informing potential study participants during the recruitment process. English and Traditional Chinese versions



Appendix C Consent form for participating in the study (interview). English and Traditional Chinese versions



TITLE OF STUDY: Exploring the Dietary Choices of Chinese Women Living with Breast Cancer in Vancouver

CONSENT FORM

Principal Investigator:

Dr Ryna Levy-Milne

Adjunct Professor, Food, Nutrition and Health

Faculty of Land and Food Systems,

University of British Columbia

Provincial Director, Clinical Operations & Practice Leader, Nutrition

BC Cancer Agency

Co-Investigators:

Dr Gwen Chapman

Professor and Associate Dean Academic, Food, Nutrition and Health

Faculty of Land and Food Systems,

University of British Columbia

Dr Lynda Balneaves

Associate Director and Associate Professor

School of Nursing, University of British Columbia

Ms. Brenda Ng

MSc candidate, Human Nutrition

Food, Nutrition and Health

Faculty of Land and Food Systems

The University of British Columbia

Purpose

Breast cancer is the most frequently diagnosed cancer in women in Canada. Several ethnic groups have culturally distinctive views on food and its consumption, including the Chinese. A significant number of breast cancer patients receiving care from the BC Cancer Agency are of Chinese heritage. We currently have few culturally specific resources to support these women in making dietary choices while on treatment and for the prevention of cancer recurrence. In this study, we want to explore your experience in making food choices. We also want to understand what types of dietary and nutritional information you might need. The information you provide at the interview will help guide us in developing culturally specific resources

related to making dietary choices.

Study Procedure

After agreeing to participate in this study and signing the consent form, a one-hour interview will be arranged. The interview can be done at your home or in one of the conference rooms (to be arranged) at the Vancouver Cancer Centre, located at 600 West 10th Avenue, at a time convenient for you. The interview will be digitally audio-recorded. After the interview, the researcher may invite you to participate in a focus group in the future to confirm the findings obtained from the interview.

Risk and Potential Benefits

Upon completion of the interview, you will receive a \$20 honorarium in the form of a gift card to compensate your time for participating in the interview. The results of this interview will help us understand the dietary and nutrition information needs of Chinese breast cancer patients. The findings will help guide the development of culturally specific resources to support these patients.

There is no known risk in participating in this study. Your decision to participate in this interview will NOT impact your care at the BC Cancer Agency or participation in other studies in the future.

Confidentiality

The information you provide during the interview will not be shared with your health care provider. We will not identify you or use your name in any research report. You will be given a

codename which links to the data you may provide. The digital audio-recorder used during the interview and hard copies of interview transcripts will be kept in a locked cabinet. All codenames and names associated with the data will be stored and filed in password protected computer files.

Consent

Your participation in this interview is voluntary and you can refuse to participate in this study at any time by contacting the research team. By signing this consent form, you agree to participate in the interview and agree to be contacted for the focus group invitation. You may refuse to participate in the focus group.

If you have any question or require information about this interview, you may contact Ms. Brenda Ng at xxxxxx

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at xxxxxx

Consent: I have read the above information and I have had a chance to ask questions about the interview, this study and my involvement. I freely choose to participate in this interview and understand that I may be invited to attend a focus group in the future. I have a copy of the consent form.

Print name of participant

Signature of participant

BCCA ID

Telephone number and/ or email

Address

Signature of witness



BC Cancer Agency

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**Title of Study: Exploring the Dietary Choices of Chinese Women Living with
Breast Cancer in Vancouver**

Consent Form – Traditional Chinese version

參與研究同意書 – 繁體中文版

研究題目: 探討卑詩省溫哥華華裔乳癌女病人選擇飲食的方法及經驗

首席研究員:

Ryna Levy-Milne 博士

卑詩大學食物營養健康學系兼任教授

土地及食物系統學院

暨

卑詩癌症局營養科總監

臨床運作及應用

副研究員:

Gwen Chapman 博士

卑詩大學食物營養健康學系教授

土地及食物系統學院副院長

Lynda Balneaves 博士

卑詩大學護士學院副院長暨副教授

Brenda Ng

人類營養學碩士研究生

卑詩大學食物營養健康學系

土地及食物系統學院

研究目的

在加拿大,乳癌是所有癌症中最常見的疾病。此外,在眾多族裔中,包括華人,都有獨特的飲食文化,對食物的見解及進食習慣。在卑詩癌症局接受乳癌治療的病人當中,有不少為華裔病人。現時,卑詩癌症局只有少量配合華裔乳癌病人飲食文化的資料來支援他們去了解及選擇食物,從而幫助減低癌病復發的機會。在這項研究中,我們希望更深入了解你在日常飲食中選擇及預備食物的經驗和方法。我們亦會探討你在選擇食物時所需要的食物及營養資料。如果你願意參與這項研究,你所提供的資料將有助卑詩癌症局去發展一些針對華裔乳癌病人所需要的健康飲食及營養教育的支援服務。

是項研究之程序

當你了解及簽署了是項研究的同意書後,我們會安排和你進行一個小時的會面訪問。這個會面訪問可以安排在你家或卑詩癌症局溫哥華中心,位於600號西10街,其中一間會議室內進行。時間方面,我們會配合你的要求。此外,整個會面訪問將會被錄音。當會面訪問結束後,研究員有可能會邀請你在未來參加一個專題小組研討會去驗證及確定所有參加者於會面訪問時提供的意見及資料。

參加是項研究之好處及壞處

當會面訪問結束後，你將會收到\$20加元的超級市場現金購物咭，以補償你參加會面訪問付出的時間。是項研究將會幫助了解華裔乳癌病人在作出飲食選擇去幫助減少癌症復發的機會時所需要的食物及營養資料。是項研究所收集到的資料將會幫助卑詩癌症局去發展一些針對華裔乳癌病人所需要的健康飲食及營養教育的支援服務。

是項研究並沒有危險性，無論你選擇參加這項研究與否都不會影響你在卑詩癌症局所接受的各種治療及不會影響你將來參與任何其他研究的機會。

保密資料

你在會面訪問中所提供的資料及你的身份將被保密及不會和你的癌症治療醫護人員分享。你的名字及身份不會在任何研究報告中被透露。我們會以一個代號來代替你的姓名及用以識別記錄你提供的資料之檔案。另外，我們會將用以錄音的數碼錄音機，有登記你姓名及代號的所有文件鎖在一個文件櫃內。所有電腦文件亦將會於有密碼保護的電腦系統中儲存。

同意意向

參加是項研究純屬自願性質。你有權於任何時間透過通知研究員去拒絕參與這項研究。當你在這份同意書簽名後，即表示你同意參與這項研究及會面訪問，並同意被邀請在未來參加一個一小時的專題小組研討會。你亦可以拒絕參與小組研討會。

歡迎詢問

若你有任何疑問，請聯絡研究員吳小姐 (Ms. Brenda Ng), 電話 xxxxxx

若你對於作為研究參與者之權益及/或對是次研究之參與經驗有任何顧慮或投訴,請聯絡卑詩大學
研究倫理辦事處所屬的研究參與者投訴熱線。電話XXXXXX

我已閱讀過這份同意書,並有機會提出關於是項研究,會面訪問及參加細節的問題。我同意參加一個會面訪問及被邀請參與一個專題小組研討會。我有一份同意書作為我的記錄。
。

參加者姓名

參加者簽名

卑詩癌症局編號

聯絡電話及電郵

聯絡地址

見證人簽名

Appendix D Questionnaire for the collection of demographic data of study participants. English and Traditional Chinese versions



BC Cancer Agency

CARE + RESEARCH

An agency of the Provincial Health Services Authority

QUESTIONNAIRE

Thesis title: Exploring the dietary choices of Chinese women living with breast cancer in Vancouver

All the information you provide will be kept confidential and your identity will be anonymous.

Participant ID:

Date of interview:

(1) Age

When were you born? _____ (Day/Month/Year)

(2) What is the main language that you speak at home? (Check all that apply)

English

Cantonese

- Mandarin
- Other (please specify)

(3) Where were you born?

- Canada
- China
- Hong Kong
- Taiwan
- Other (please specify)

(4) Where was your mother born?

- Canada
- China
- Hong Kong
- Taiwan
- Other (please specify)

(5) Where was your father born?

- Canada
- China
- Hong Kong
- Taiwan
- Other (please specify)

(6) How long have you lived in Canada? (Check one answer)

- Since birth
- Less than 1 year
- 1 to 3 years
- 3 to 5 years
- 5 to 10 years
- 10 years+

(7) When were you diagnosed with breast cancer? (month/year)

(8) What is your marital status: (Check one answer)

- Single (Never married)
- Married/ Common-law
- Separated
- Divorced
- Widowed

(9) Employment Status

- Work full-time
- Work part-time
- Homemaker
- On disability
- Retired

Other (please specify): _____

(10) What is the highest level of education you obtained?

- Some secondary (high) school or less
- Secondary (high) school education completed
- Some college or university
- College certificate or diploma
- University degree completed
- University postgraduate degree completed

(End of questionnaire)



BC Cancer Agency

CARE + RESEARCH

An agency of the Provincial Health Services Authority

**TITLE OF STUDY: Exploring the Dietary Choices of Chinese Women Living with
Breast Cancer in Vancouver**

QUESTIONNAIRE – Traditional Chinese version

問卷 - 繁體中文版

研究題目: 了解卑詩省溫哥華華裔乳癌女病人選擇飲食的方法及經驗

你所提供的資料及你的身份將會被保密

參加者代號:

會面訪問進行日期:

(1) 年齡

你的出生日期是: _____ (日/月/年)

(2) 你的出生地是:

- 加拿大
- 中國
- 香港
- 台灣
- 其他 (請註明)

(3) 你在家中常說的語言是:

- 英語
- 廣東話
- 國語
- 其他 (請註明)

(4) 你的母親的出生地是:

- 加拿大
- 中國
- 香港
- 台灣
- 其他 (請註明)

(5) 你的父親的出生地是:

- 加拿大
- 中國
- 香港
- 台灣
- 其他 (請註明)

(6) 請問你在加拿大居住了多久?

- 由出生到現在
- 少於 1 年
- 1 至 3 年
- 3 至 5 年
- 5 至 10 年
- 多於 10 年

(7) 請問你是在何時被診斷出有乳癌呢? (月 / 年)

(8) 請問你的婚姻狀況是:

- 單身 (從未結婚)
- 已婚/ 同居普通法伴侶
- 分居
- 離婚
- 寡鰥

(9) 請問你的工作狀況是:

- 全職工作
- 兼職工作
- 家庭主婦
- 正在接受殘障福利
- 已退休
- 其他 (請註明): _____

(10) 請問你最高的教育程度是甚麼呢?

- 有過一些中學教育或以下
- 完成中學程度
- 有過一些專上學院或大學教育
- 專上學院證書或文憑

- 完成大學學士學位
- 完成大學碩士或博士學位

(問卷完畢)

Appendix E Semi-structured interview guide. English and Traditional Chinese versions



INTERVIEW GUIDE

Thesis title: Exploring the Dietary Choices of Chinese Women Living with Breast Cancer in Vancouver

To the participants: We are conducting this study to understand the dietary choices of Chinese women living with breast cancer in Vancouver. This interview will be digitally

audio-recorded. I will be making notes while conducting the interview. All the information you provide will be kept confidential and your identity will be anonymous.

Participant ID:

Date of interview:

Background information (see questionnaire):

Age, language spoken at home, country of origin, length of residence in B.C., time of diagnosis, marital status, education, occupation

(1) How food choices are made

- (i) Can you describe what you ate yesterday; starting with the first time you ate or drank?
- (ii) Was yesterday a typical day for you? If not, what was different?
- (iii) What types of things do you consider when you make decisions about what you eat?

(2) Dietary patterns before and after cancer diagnosis

Background information: time of cancer diagnosis?

- (i) When you think about what you eat now, compared to what you were eating before your cancer diagnosis, what has changed (if anything)?

Probe: (a) Why have you made those changes?

(b) How has your cancer diagnosis influenced your food choices?

- (ii) What do you hope these food choices will achieve with regard to your overall health? For your cancer diagnosis?

(3) Effects of acculturation on dietary patterns (if applicable)

Background information: Time of migration and length of residence in B.C.?

- (i) How have your food choices (what you eat/ diet) changed since you moved to Canada?

(Alternative for 2nd generation women: How have your food choices changed since you were growing up, living with your parents?)

- (ii) If you were in China, what different food choices might you make?
- (iii) What was your diet like when you first moved to Canada? What is your diet like now?

(4) Perceptions of healthy eating

- (i) What does “healthy eating” mean to you?

- (ii) Some Chinese Canadians talk about differences between Western and Chinese ways of understanding how food and eating relate to health. How do you compare Western and Chinese ways of talking about food and health?

Probe: (a) In what ways are Chinese ways of talking about food and health relevant to the ways you eat?

(b) In what ways are Western ways of talking about food and health relevant in the ways you eat?

(5) Sources of dietary advice/ nutrition information (for recurrence prevention and/or health promotion)

- (i) Please describe where you typically look for information about food and nutrition?

- (ii) Since your cancer diagnosis, have you talked to anyone about food and nutrition? What sorts of things did you talk about? Can you describe an interaction you had about food that was particularly useful/ important to you?

- (iii) We talked earlier about Chinese and Western ways of thinking about food and health. How would you describe the interactions you’ve had about food and nutrition in terms of Chinese and Western approaches?

(Probe about confusion or conflicting advice is appropriate)

(6) Knowledge and perceptions of current BC Cancer Agency (BCCA) dietary guidelines/ nutrition support service for breast cancer women

- (i) Which BCCA healthcare team member have you talked to about your diet? About food choices that would prevent cancer from coming back? For promoting/ improving your overall health?
- (ii) What was helpful about the information about food you received from the BCCA healthcare provider?
- (iii) Was there anything about the information that was difficult to understand?
- (iv) Was there any information about food you received that was not helpful?
- (v) Have you been given a copy of the BCCA Nutrition Guide for Women with Breast Cancer (electronic or hard copy)? If yes, do you find it helpful for you to make dietary choices?

(7) Information needs of Chinese women living with breast cancer in Vancouver

- (i) Where would you like to receive information about food from the BCCA? In what form would you like to receive this information (In person/ On a website/ In a booklet)?
- (ii) When would be the best time for an individual living with cancer to receive this information?
- (iii) What recommendations would you have for the BCCA regarding providing information about food to individuals from your community?

(End of interview guide)

**Title of Study: Exploring the Dietary Choices of Chinese Women Living with
Breast Cancer in Vancouver**

Interview Guide (Traditional Chinese version)

會面訪問指引- 繁體中文版

研究題目: 了解卑詩省溫哥華華裔乳癌女病人選擇飲食的方法及經驗

致參加者: 在這項研究中, 我們希望了解你在日常飲食中選擇及預備食物的經驗和方法。
整個會面訪問將會被錄音。 在會面訪問過程中, 研究員亦將會用書寫方法筆錄資料。 你
在會面訪問中所提供的資料及你的身份將會被保密。

參加者代號:

會面訪問進行日期:

背景資料 (見問卷):

年齡, 在家中常用語言, 出生地, 在卑詩省居住的時間,

癌症被診斷的時間, 婚姻狀況, 教育程度, 職業

(1) 怎樣選擇食物

- (i) 你可否形容一下你昨天吃了甚麼? 就由第一餐的飲食說起
- (ii) 你昨天飲食的模式是否你慣常的模式?
如果不是, 那有什麼不同?
- (iii) 當你選擇食物時, 有甚麼東西你會考慮到而影響你的決定?

(2) 癌症被診斷前後之飲食模式

背景資料: 癌症被診斷的時間

- (i) 當你想現時的飲食模式及回顧你在乳癌被診斷之前的飲食模式, 你能形容一下有甚麼改變嗎? (如果有任何改變的話)

深入探討: (a) 為甚麼會有這些改變?

(b) 乳癌的發生怎樣改變你選擇飲食的方法?

- (ii) 你希望這些飲食選擇為你的整體健康達到甚麼目的? 為你的癌症呢?

(3) 文化適應對飲食模式的影響 (如果適用)

背景資料: 移居及居住在卑詩省的時間

- (i) 你移居加拿大之後, 你的飲食選擇有甚麼樣的變化?

- (ii) (以下這問題適用於第二代華裔乳癌病人: 你現在的飲食選擇跟以前小時候和父母同住的時候有甚麼分別, 有甚麼樣的變化?)

- (iii) 如果你現時居住在中國, 你會有甚麼不同的飲食選擇呢?

- (iv) 請你回想及形容你剛移居來加拿大時的飲食選擇? 你現時的飲食選擇又如何呢?

(4) 對於健康飲食的理解

- (i) 請問你認為 ” 健康飲食 ” 的意思是甚麼?

- (ii) 有些華裔加拿大人談論到西方社會及華人社會對於飲食和健康的關係之不同觀點. 你會怎樣比較這兩套不同的觀點?

深入探討:

- (a) 你的飲食方法和華人社會對於飲食和健康的關係之觀點有甚麼關連之處?

(b) 你的飲食方法和西方社會對於飲食和健康的關係之觀點有甚麼關連之處?
?

(5) 飲食方法建議/ 營養資訊的資料來源 (幫助預防癌症復發及保健目的)

- (i) 請形容一下你一般會在那兒找尋關於食物及營養的資料?
- (ii) 自從你被診斷患了乳癌後, 你有否和任何人討論過食物及營養呢? 討論過甚麼話題? 可否形容一下其中那些關於食物的對話討論是你覺得有幫助/ 或對你來說是重要的?
- (iii) 我們剛才曾討論過有些華裔加拿大人談論到西方社會及華人社會對於飲食和健康的關係之不同觀點. 憑著這些不同的觀點, 你會怎樣形容你曾經有過關於食物營養的對話討論?

(深入探討: 在此處可嘗試了解參加者有否覺得曾遇到有矛盾的飲食建議或對建議感到混淆)

(6) 參加者對於卑詩癌症局現時為乳癌病人提供的飲食指南/ 營養教育支援服務之了解及認識

- (i) 你曾對那位卑詩癌症局的醫護人員討論過關於你的飲食選擇? 關於選擇一些食物去幫助預防癌症復發或增進及改善健康狀況?
- (ii) 你覺得卑詩癌症局醫護人員提供的飲食營養資料對你有幫助嗎? 有甚麼樣的幫助?

- (iii) 在這些飲食營養資料裏, 你有否發現任何很難明白的內容?
- (iv) 在這些飲食營養資料裏, 你有否發現任何沒有幫助的內容?
- (v) 你有否曾經收到過一本由卑詩癌症局製作的“給患有乳癌女士的飲食營養指南”(電子或印刷版)? 如果有, 你覺得這本指南對你在作出飲食選擇時有沒有幫助?

(7) 卑詩省華裔乳癌女病人對飲食營養資料的需要

- (i) 你希望在那兒及以那種形式接收到由卑詩癌症局提供的關於飲食營養的資料 (親身到卑詩癌症局索取/ 互聯網/ 印刷版小冊子)?
- (ii) 你認為當病人被診斷癌症後在那一個階段接收到飲食營養的資料最為理想呢?
- (iii) 你對於卑詩癌症局發展配合華裔乳癌女病人需要的飲食營養教育及支援服務有甚麼建議?

(會面訪問指引完)

Appendix F Consent form to participate in the focus group session. English and Traditional Chinese versions

TITLE OF STUDY: Exploring the Dietary Choices of Chinese Women Living with Breast Cancer in Vancouver

CONSENT FORM FOR FOCUS GROUP PARTICIPATION

Principal Investigator:

Dr Ryna Levy-Milne

Adjunct Professor, Food, Nutrition and Health

Faculty of Land and Food Systems,

University of British Columbia

Provincial Director, Clinical Operations & Practice Leader, Nutrition

BC Cancer Agency

Co-Investigators:

Dr Gwen Chapman

Professor and Associate Dean Academic, Food, Nutrition and Health

Faculty of Land and Food Systems,

University of British Columbia

Dr Lynda Balneaves

Associate Director and Associate Professor

School of Nursing, University of British Columbia

Ms. Brenda Ng

MSc candidate, Human Nutrition

Food, Nutrition and Health

Faculty of Land and Food Systems

University of British Columbia

Purpose

Breast cancer is the most frequently diagnosed cancer in women in Canada. Several ethnic groups have culturally distinctive views on food and its consumption, including the Chinese. A significant number of breast cancer patients receiving care from the BC Cancer Agency are of Chinese heritage. We currently have few culturally specific resources to support these women in making dietary choices while on treatment and for the prevention of cancer recurrence. In this study, we want to explore your experience in making food choices. We also want to understand what types of dietary and nutritional information you might need. The information you provide at the interview will help guide us in developing culturally specific resources related to making dietary choices.

Study Procedure

After you have signed this consent form, you will participate in the focus group for about one and a half hours. This focus group will be held in John Jambor East Conference Room located on the ground floor at BC Cancer Agency, Vancouver Centre, 600 West 10th Avenue, Vancouver, BC at 4:00pm on 16 December 2015 (Wednesday). This focus group meeting will be digitally audio-recorded. The purpose of the focus group is to confirm the findings obtained from the interviews previously conducted with individual participants.

Risk and Potential Benefits

The focus group session will help us confirm the study findings collected during the interviews,

which may help develop culturally specific resources to support Chinese breast cancer patients in making dietary choices for the prevention of recurrence. There is no known risk in participating in this focus group. Your decision to participate in this focus group will NOT impact your care at the BC Cancer Agency or participation in other studies in the future.

Confidentiality

The information you provide during the focus group will not be shared with your health care provider. We will not identify you or use your name in any research report. You will be given a codename which links to the data you may provide. The digital audio-recorder used during the focus group and hard copies of transcripts will be kept in a locked cabinet. All codenames and names associated with the data will be stored and filed in password protected computer files.

Consent

Your participation is voluntary. You are under no obligation to participate in the focus group. You can refuse to participate in the focus group at any time. Your choice on whether to participate in the focus group or not will NOT affect your care at the BC Cancer Agency or any invitations to participate in any future research projects. The information you provide will be kept confidential and will not be shared with your health care provider.

If you have any question or require information about the focus group, you may contact Ms.

Brenda Ng at xxxxxx

If you have any concerns or complaints about your rights as a research participant and/or your experiences while participating in this study, contact the Research Participant Complaint Line in the UBC Office of Research Ethics at xxxxxx

Consent: I have read the above information and I have had a chance to ask questions about the focus group, this study and my involvement. I freely choose to participate in this focus group and I have a copy of the consent form.

Print name of participant

Signature of participant

BCCA ID

Telephone number and/ or email

Address

Signature of witness

**Title of Study: Exploring the Dietary Choices of Chinese Women Living with
Breast Cancer in Vancouver**

CONSENT FORM FOR FOCUS GROUP – Traditional Chinese version

參與小組研討會同意書 – 繁體中文版

研究題目: 探討卑詩省溫哥華華裔乳癌女病人選擇飲食的方法及經驗

首席研究員:

Ryna Levy-Milne 博士

卑詩大學食物營養健康學系兼任教授

土地及食物系統學院

暨

卑詩癌症局營養科總監

臨床運作及應用

副研究員:

Gwen Chapman 博士

卑詩大學食物營養健康學系教授

土地及食物系統學院副院長

Lynda Balneaves 博士

卑詩大學護士學院副院長暨副教授

Brenda Ng

人類營養學碩士研究生

卑詩大學食物營養健康學系

土地及食物系統學院

研究目的

在加拿大, 乳癌是所有癌症中最常見的疾病。此外, 在眾多族裔中, 包括華人, 都有獨特的飲食文化, 對食物的見解及進食習慣。在卑詩癌症局接受乳癌治療的病人當中, 有不少為華裔病人。現時, 卑詩癌症局只有少量配合華裔乳癌病人飲食文化的資料來支援他們去了解及選擇食物, 從而幫助減低癌病復發的機會。在這項研究中, 我們希望更深入了解你在日常飲食中選擇及預備食物的經驗和方法。我們亦會探討你在選擇食物時所需要的食物及營養資料。如果你願意參與這項研究, 你所提供的資料將有助卑詩癌症局去發展一些針對華裔乳癌病人所需要的健康飲食及營養教育的支援服務。

是項研究之程序

當你了解及簽署了是項研究的同意書後, 我們會安排你參與一個若一個半小時的小組研討會。這個小組研討會將會於卑詩癌症局溫哥華中心, 位於600 號 西10街內的 John Jambor East 會議室進行(會議室位於中心大堂同一層 Ground Floor)。時間為 2015 年 12月16日(星期三)下午 四時正(4:00pm)。此外, 整個小組研討會將會被錄音。研討會會驗證及確定所有參加者於會面訪問時提供的意見及資料。

參加是項研究之好處及壞處

是項小組研討會會驗證及確定所有參加者於會面訪問時提供的意見及資料。所收集到的資料將會幫助卑詩癌症局去發展配合華裔乳癌病人所需要的食物營養教育及支援服務。

是項小組研討會並沒有危險性。無論你選擇參加這研討會與否都不會影響你在卑詩癌症局所接受的各種治療及不會影響你將來參與任何其他研究的機會。

保密資料

你在小組研討會中所提供的資料及你的身份將被保密及不會和你的癌症治療醫護人員分享。你的名字及身份不會在任何研究報告中被透露。我們會以一個代號來代替你的姓名及用以識別記錄你提供的資料之檔案。另外，我們會將用以錄音的數碼錄音機，有登記你姓名及代號的所有文件鎖在一個文件櫃內。所有電腦文件亦將會於有密碼保護的電腦系統中儲存。

同意意向

參加是項小組研討會純屬自願性質。你沒有責任參與這項小組研討會亦有權於任時間透過通知研究員去拒絕參與這項活動。無論你選擇參加這研討會與否都不會影響你在卑詩癌症局所接受的各種治療及不會影響你將來參與任何其他研究的機會。你在小組研討會中所提供的資料及你的身份將被保密及不會和你的癌症治療醫護人員分享。

歡迎詢問

若你對於是項小組研討會有任何疑問，請聯絡研究員吳小姐 (Ms. Brenda Ng), xxxxxx

若你對於作為研究參與者之權益及/或對是次研究之參與經驗有任何顧慮或投訴, 請聯絡卑詩大學
研究倫理辦事處所屬的研究參與者投訴熱線. xxxxxx

*我已閱讀過這份同意書, 並有機會提出關於是項小組研討會, 是項研究及關於我的參與之
問題. 我同意參加是項小組研討會. 我有一份同意書作為我的記錄。*

參加者姓名

參加者簽名

卑詩癌症局編號


聯絡電話及電郵

聯絡地址

見證人簽名

**Appendix G Presentation powerpoint for the focus group session. English and
Traditional Chinese versions.**

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FOCUS GROUP MEETING 16 December 2015

EXPLORING THE DIETARY CHOICES OF CHINESE WOMEN LIVING WITH BREAST CANCER IN BRITISH COLUMBIA

Brenda Ng MSc Candidate, Human Nutrition

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OUTLINE

Introduction

Brief overview of this Study

Preliminary findings and discussion

Summary



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Introduction

Principal Investigators

Ryna Levy-Milne, RD, PhD
Provincial Director, Clinical Operations & Practice Leader, Nutrition
BC Cancer Agency

Gwen Chapman, PhD, RD
Professor
Food, Health and Nutrition
Faculty of Land and Food Systems
The University of British Columbia

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Brief Overview Of This Study

Exploring the Dietary Choices of Chinese Women Living with Breast Cancer in British Columbia



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beliefs

what?


RESEARCH QUESTIONS

how?

perceptions?

needs?


who?



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METHOD and DESIGN



19 participants recruited at BC Cancer Agency and interviewed with informed consent

14 first and 5 second generation Chinese Canadian women aged 41-73y

6 English, 7 Cantonese and 6 Mandarin-speaking

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Preliminary Findings and Discussion
初步研究發現及討論

4 Main topics 結果主題 :

Topic #1 Dietary change processes
飲食選擇的演變過程

Topic #2 Goals of change, Dietary beliefs and Uncertainties
癌症後改變飲食選擇之目的, 對食物的信念及不肯定之事項

Topic #3 Barriers and facilitators to the changes
癌症後改變飲食選擇過程中遇到的障礙及幫助

Topic #4 Information and resource needs
製作飲食選擇及營養所需要的資料及支援服務

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Topic #1 Dietary change processes
飲食選擇的演變過程

DEGREE OF CHANGE
轉變的程度

Degree of Change	No. of participants (n=19)
No effort	1
Some effort	2
Quite effort	5
Significantly effort	9
Completely effort	2

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Topic #1 Dietary Change Processes

TYPES OF CHANGES?
轉變的類型

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Topic #2 Goals of dietary change 癌症後改變飲食選擇之目的

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Topic #2 Dietary beliefs and Uncertainties
對食物的信念及不肯定之事項

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Topic #3 Barriers and facilitators to the changes
癌症後改變飲食選擇過程中遇到的障礙及幫助

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Topic #3 Barriers and facilitators to the changes
癌症後改變飲食選擇過程中遇到的障礙及幫助

(A) Family 家庭



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Topic #3 Barriers and facilitators to the changes
癌症後改變飲食選擇過程中遇到的障礙及幫助

(B) WORK/ CONVENIENCE
工作/方便程度



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Topic #3 Barriers and facilitators to the changes
癌症後改變飲食選擇過程中遇到的障礙及幫助

(C) TASTE PREFERENCE/ QUALITY OF LIFE/ SOCIAL EATING
喜歡傳統口味/ 保持生活質素/ 社交活動



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Topic #3 Barriers and facilitators to the changes
癌症後改變飲食選擇過程中遇到的障礙及幫助

(D) COST OF SPECIALTY FOODS 特別食品種類價錢
(Organic, Chinese herbs, ethnic foods)
(有機食物, 中藥, 華夏風味傳統食品)



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Topic #4 Information/ Resource Needs
對作飲食選擇及營養所需要的資料及支援服務

(A) Effects of food – on risk of recurrence
那些食物會增加/ 減少乳癌復發的機會



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Topic #4 Information/ Resource Needs
對作飲食選擇及營養所需要的資料及支援服務

(B) Credible information
在哪裡有提供可靠資料

Source of Information 主要來源



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Topic #4 Information/ Resource Needs
動作飲食選擇及營養所需要的資料及支援服務

(C) Resource needs expressed
所需要的支援服務



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SUMMARY

Please tell us ONE thing that you think it's very important to inform the researchers about this Study.

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Acknowledgements



Dr Ryna Levy-Milne
Dr Zhaoming Xu

Dr Gwen Chapman
Dr Lynda Balneaves

ALL PARTICIPANTS!!

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Appendix H Notes taken during the focus group session

December 16, 2015

Purpose: To understand if there were things the participants would like to add to enrich the findings

Anything wrong? Anything missing?

- (1) In what ways is your experience the same or similar?
- (2) Different?
- (3) What is missing?

Theme 1 – Dietary change process

Any difference between diet pre- and post- diagnosis?

Interviews:

Decreased intake on certain foods – meat, packaged, deep-fried

Increased intake on certain foods – fruits and vegetables, organic food, nutritional supplement

Became more mindful of what that ate

Focussed on family's health

Traditional Chinese food – more especially right after treatment

Focus group session:

Agreed with findings presented

#004 – post-diagnosis - decreased intake on foods from childhood – salted preserved vegetables

considered only taste before diagnosis

considered more about nutrition after especially to get calcium from diet

#011: post-diagnosis - read labels – stayed away from modified ingredients

#006: started to learn, explore different ways of cooking

took some classes at Inspire Health

Chinese soups – ingredients ready here

Added herbs to food – turmeric, lentils, foreign before; didn't know before, been exploring

#001: Uncertain about the safety of consuming white beans/lentils

talked to DTCM – advised not to eat

any evidence-based info on this?

Wanted to get credible information

Theme 2 – Goals of dietary change

Interviews:

“To do something” for their cancer conditions

For healthy weight management

To reduce risk of recurrence

For health maintenance

To protect healthy cells against chemo/ radiation

For the health of family

Focus group session:

Agreed with findings presented

#004: tried to “do something different”

uncertain but “wanted to do something” for her cancer condition

#011: learned new ways to prepare salads with balsamic vinegar and olive oil as suggested by dietitians

Theme 3 – Dietary beliefs and uncertainties

Interviews:

Preferred cooked and warm foods vs. raw salads

Traditional Chinese soups are healthy – important to make soups for health maintenance

Some ethnic foods like: medicinal mushrooms

Fear of meat and dairy – animals being fed/ injected with hormones/ antibiotics –
believed to be not good for cancer

Unsure about ethnic foods

Learned from “lots of people” – friends, family, media, social media

Focus group session:

Agreed with findings presented

#006: always cooked vegetables, no salad – maybe in the summer is ok

Soups – yes

Now learning more ingredients

Meat – still eat meat; if budget allows organic meat

Vegetables – not necessarily organic

Agreed with the dietary beliefs presented

Budge

Books, media, many people said medicinal mushrooms were beneficial

#004: Traditionally, family cooked vegetables; raw veg ok but taste not suitable for

Chinese

Chinese soups – taste was good; thought they were good but have been getting
conflicting info on the benefits – uncertainty

Meat – tried to buy organic especially pork and chicken

Beef – not widely available

Ate less beef now

Medicinal mushrooms – before refused but many friends took that and convinced her to take – to boost immune system

Last few months – had mammogram done – undesirable results so got frightened and started taking mushroom supplement out of fear; still don't believe in the benefits

#007: Family cut down on red meat

Read somewhere that meat was not good

Not cooking separately

Got various info/ advice

No budget to consume organic meat

Availability too – organic and free-range eggs now

Showed medicinal mushroom supplement (Reishi) to oncologist; oncologist advise if she believed in it then take it

#010: Preferred cooked vegetables; will eat salad

Liked Traditional Chinese soups – got conflicting info about the benefits – uncertain so drank less/ in moderation

Decreased intake on red meat

Reishi mushrooms – took it for a year but did not believe in it

One of the co-supervisors asked about the conflicting info on Trad Chinese soups. Participant stated that she has been drinking these soups for her whole life but now had uncertainty about the benefits of these traditional soups and foods

Theme 4 – Barriers and facilitators to dietary change

Interviews:

Barriers and facilitator – family preference, work-life balance, taste

Patients became more mindful and tried to strike a balance among nutrition, taste, quality of life

e.g. dim sum – social gathering with friends, family

Cost of organic and ethnic foods – fish maw, cordyceps – believed to be beneficial

Budget might be a barrier

Focus group session:

Agreed with findings presented

#011: 80-20 dietary rule

weekday – healthy

weekend – “cheat”, eat whatever

something to look forward to

#006: 70-30 rule

Chinese sausage – bought and ate them at home pre-diagnosis

Now won't buy but ate them when eating out – just had a small amount occasionally

#007: Organic food – price is an issue

Meat and veggies – normally won't buy organic, only when they were on sale

Thought they were healthier – also for family

White and brown rice – family members hate brown rice

Family preference is a challenge

#010: Kids now grown up so had brown rice with husband on weekdays

Had white rice on weekends when kids had dinner at home

Family preference came first

#004: Is it safe to eat pork and chicken in B.C?

Uncertain about meat/ organic vs. conventional

Fear of hormones and antibiotics in meat

Should we eat brown rice instead of white rice? More nutritious?

But white rice is more preferred

Co-supervisor#1: Uncertainties about what choices to make because there are so much info from various sources. Eating everything in moderation is the key.

80-20/ 70-30 rule

If you really enjoy white rice, it's ok to have it

Facilitator: what helped you made the changes e.g. something is on sale, organic foods on sale – cost

Access to food - availability

Co-supervisor#2: Foods you liked, used to eating food that satisfied you, comforted you

Conflict came in between the foods you like, found pleasure in, comforting but maybe different from food other people told you to eat

That's where the 80-20/70-30 rule came from. Have to balance all your needs.

No one food gives us everything we need/ bad for us

Foods that are less processed usually give more fibre, more nutritious

Other topics?

#001: Do we need to seek advice from DTCM to take TCM for health maintenance? Is it necessary?

Concepts on diet are different under TCM and Western conventional medicine – have been receiving conflicting info from DTCM and different sources

Co-supervisor#1: It is a personal choice

If it's something you think it's helpful. I couldn't advise – goes back to the conflicting info

We are trying to find out what the conflicts are so that we can facilitate discussions

Find out what the needs are – important

We need to understand how you choose food

Co-supervisor#2: This is part of what the whole research is about – the study aims to find out how patients can work through the conflicting sources of info

There are different belief systems and knowledge systems

Western medicine has a certain way of gaining info and how things work

TCM maybe based on a different system

It is not our role to say what it is right, what is wrong, each person has to try to make decision what's right for them

We are not going to give advice which way is right/wrong

Nobody can really answer

Conflicting info – is this a common experience for all of you? – Yes from all participants

#007: All these conflicting info you got from soy/tofu

#001: Conflicting info on sugar/ sweets

Theme 5 – Information and resource needs

This is about what information participants wanted and their questions

Interview:

Effects of food on risk of recurrence – acid-alkali balance, sugar, tofu/soy, cheese/dairy, ethnic foods e.g. salted fish, preserved vegetables

Credible info – where can patients get credible/ scientific info

Sources: Advice from friends and family, library books re: cooking, healthy eating

Inspire Health, DTCM, Internet, Use own judgments – before they made decision

Hoping to see from BCCA – website on food + nutrition info in Chinese language
mostly for first generation

Seminars conducted by RDs who are familiar with Chinese diet

Culturally specific resources/ Cooking demonstration/ classes with different
approaches

Focus group session:

HAS THE LEAD RESEARCHER COVERED EVERYTHING HERE?

#004: Really hope BCCA can work with other people to give more trustworthy ans

because when turned to Internet, always found conflicting info/ changing info

Need source of credible information

#007: Asked oncologist about alcohol and he said even if you drink less, you might die
of other causes! (like heart disease)

Guilty – takes away the pleasure

I do like my drink – don't want to feel guilty

#001: Question about sugar

#011: Med onc told me I could just eat anything, mostly fruit and veg

Rad onc said the same thing, focus on exercise

GP doesn't seem to know anything

Comforting to learn that BCCA has the entire file of my condition

Didn't want to read anything in the beginning

Co-supervisor#2: Not a problem getting info from oncologist/ Internet

Problem was: when information was not specific enough

Not lack of info but TOO much info – agreed by all

#007: Info differs, depends on which website

Difficult to make sense out of the horrendous information

Co-supervisor#3: Always want to know when to provide information related to food and nutrition

SUMMARY

Participants were asked to share one thing very important that they wanted the researcher and co-supervisors to know

#006: Happy to see someone doing this study

Something/ food you are raised and grew up with

Hoping to see some evidence (evidence-based info) we can follow

#004: Purpose of participating

Always have some question on my mind when cooking

Traditional Chinese way – is it good or not?

Don't know how to approach/ who to approach (for info)

Internet – too much conflicting info – unsure

Hope can ask here and trust (credible info)

#011: Many participants afraid to ask question – how this population can be assisted?

#001: Everything you did was good!

#007: Hoping to see some resource guide

Where to get some of the foods

How to prepare the foods/ prep tips

#010: Hard to have a confirmed answer

Every patient is different and has different needs

Hope to see more answers/ advice

Different approaches to suit the needs of different patients

(end of Appendices)