DISSERTATION REPORT

ON

"To explore the factors that influence GP consultation by women with breast cancer symptoms"

Submitted By

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CERTIFICATES

Certificate from Dissertation Advisory Committee

This is to certify that Dr. Veera Sardana, a graduate student of the Post- Graduate Diploma in Health and Hospital Management has worked under our guidance and supervision. She is submitting this Dissertation titled "To explore the factors that influence GP consultation by women with breast cancer symptoms" in partial fulfilment of the requirements for the award of the Post- Graduate Diploma in Health and Hospital Management.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been Reproduced from any other dissertation, monograph, report or book.

Faculty Mentor

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Organizational Advisor

Designation

IHC

Sr. Consultant

Organization

Address

Date

Certificate of Approval

The following dissertation titled "To explore the factors that influence GP consultation by women with breast cancer symptoms" is hereby approved as a certified study in management carried out and presented in a manner satisfactory to warrant its acceptance as a prerequisite for the award of Post- Graduate Diploma in Health and Hospital Management for which it has been submitted. It is Understood that by this approval the undersigned do not necessarily endorse or approve any statement Made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it Is submitted.

Dissertation Examination Committee for evaluation of dissertation

Name Signature

Dr. Preetha GS _____

_____ _____

_____ _____

Certificate of Internship Completion

Date:

TO WHOM IT MAY CONCERN

This is to certify that Dr. Veera has successfully completed her 3 months internship in our Organization from December 19, 2011 to March 19, 2012. During this intern he has worked on Various projects going on in different hospitals like Lifeaid Hospital, Aarvy Hospital, Kalyani Hospital under the guidance of me and my team at INDIAN HEALTH CONSULTANTS

We wish her good luck for his/her future assignments.

(Signature)

Anurag Srivastava (Name)

Sr. Consultant Designation

PART 1

INTERNSHIP REPORT

THE OBJECTIVE OF THE INTERNSHIP IN INDIAN HEALTH CONSULTANTS, GURGAON

Was to gather an exhaustive knowledge of the knowledge processing organisation and apply the insights so gained to succeed in the same industry.

The following managerial tasks were bestowed upon me while I slowly prepared for my dissertation. The list also entails the skills that I acquired while working for the organisation.

1) Team work- No one in the team was a loner. Everyone had to compile various bits and pieces of information, which needed to be compiled at the end of the day for the final deliverable to the client.

2) Leadership- another very important aspect, as the organisation is a flat organisation. Everyone and anyone have to lead a particular 'crumble of the big cookie'

3) Emphasis on productivity- Gone are the days when an employee would just have to focus on the so-called meeting the dead line for a project. The mantra of the organization is to master the art of the doing the job in the least amount of time, without sacrificing on the quality of the work.

4) Modesty- a hard to understand skill, though highly important. An employee has to understand the concept of seniority and how to deal with the much experienced people who work at the same levels as he does.

5) Time management- This skill was learnt the hard way and I feel it's very important to have a set timeline for everything. Time management eventually helps you to identify targets and aim to achieve them in a systematic planned manner.

Summary – While most of the Fresh Healthcare Management Graduates work in one single department during this period and have limited learning, I was fortunate to get exposure to virtually all the areas of Healthcare which has prepared me for a wider role in my career.

REFLECTIVE LEARNING

- Understood the basics of Gurgaon and Indian healthcare.
- Understood the basics of SEO and SMO.
- Understood the Importance of contents in websites.
- Learned how to organize CME's and how to manage disasters occurring during CME's
- Learned the procedure of TPA and insurance company's empanelment.
- Learned the importance of branding in Healthcare industry.
- Got the practical knowledge of healthcare marketing.
- Learned to write articles in magazines.

ACTIVITIES DONE DURING MY INTERNSHIP.

During my internship, I was engaged in general management. I did the following:

- Orientation/Training for 15 days.
- Visiting our clients and understanding their business.
- Meeting with all the clients and understanding their requirements.
- Content writing for the websites gurgaoncardiology.com, kalyanihospital.com, Aarvy hospital, Sethi hospital.
- Assisted in organizing a series of CME`s for Modern Diagnostics And Research Centre at Narnaul, Faridabad, Gurgaon.
- Assisted in organizing CME for Aarvy Hospital at Gurgaon.
- Facilitated a lot of international patients coming from Nigeria, Uganda & United states of America.
- Did SEO & SMO for our clients using Facebook, Twitter and other social networking sites.
- Tie up with insurance companies & TPA's for our clients.
- Assisted in branding, both internal & external for our clients.
- Worked in the following segments of Healthcare Marketing –, Direct, International and Corporate.
- Co-ordinated the treatment of International patients from replying their queries to complete facilitation like visa request, currency change, airport pick up, guest house booking, appointment with doctor, diagnostic testing and then finalizing the line of treatment in terms of selection of the doctor, hospital and cost of treatment.
- In my role as Associate Editor for online health magazine www.healthinindia.net I wrote articles on marketing in health care, best doctor of the month.

ABOUT THE ORGANISATION

INDIAN HEALTH CONSULTANTS

Indian Health Consultants (IHC) is an organization working in the domain of Health Management. We provide customized and cost effective solutions to the health care providers, patients, corporate, hospitals, doctors, insurance companies, third party administrators, medical tourism companies, health products manufacturers, pharmaceutical companies, healthcare workers, nurses, paramedical staff and advertising industry.

IHC hires marketing teams in all fields of healthcare marketing and offer very cost effective solutions to healthcare providers. The philosophy of IHC is to hire expert professionals in areas which are common to all healthcare providers and offer its services to multiple players thereby reducing the cost of service.

The company is promoted by Mr. Kuldeep Chaudhary who is a veteran of healthcare with an experience of more than 12 years at top healthcare institutes. He has headed the marketing departments of tertiary care hospitals - Artemis Health Institute, Gurgaon and Paras Hospital, Gurgaon. Both these hospitals are 250 bedded facilities with the former specializing in cancer & cardiac care while the latter specializing in Neurosciences.

THE TEAM OF HEALTHCARE PROFESSIONALS

IHC include Mr. Anurag Srivastava (Consultant - Brand & Communications), Dr. (Maj) Rahul Prashad (Consultant - Online Marketing & Head-Medical Affairs). All of them have long experience of working with top hospitals in the country in the marketing departments handling various segments. The team is supported by highly qualified Associate Consultants - Ms. Nazish Siddiqui, Dr. Veera Sardana and Mr. Shubham Dhankar.

Our Vision

IHC started small but has handled more than 100 healthcare assignments in the last 2 years.

Our Vision is to make our clients businesses profitable, to provide them sustainable, cost effective and easy to implement solutions. We intend to be the most favoured partners for healthcare providers across the globe.

Our Mission

Our mission is to create an organization where each employee feels satisfied, works in the area of her choice and takes responsibilities which they relish, decide how much they want to earn and how much time they want to work. The idea is to create a platform where there are no bosses and no employees just a group of talented professionals sharing the vision of the organization.

Our Commitment

At IHC, we are committed to implement long lasting and sustainable solutions for our clients. Our team fully understands the client's business model and implement suitable solutions which will bring maximum benefits to the client. We never share the client secrets with anybody else and are committed to the success of the client's business

A large segment of healthcare in India is driven by doctors who excel in their chosen profession. IHC provides solutions in the field of healthcare delivery to the doctors to run their operations efficiently. The solutions offered by IHC cover the entire gamut of healthcare from individual doctors running clinics, nursing homes, secondary & tertiary care hospitals. We take care of the associated functions of marketing, HR, Administration & Finance in a healthcare setup which enables the doctors to focus on their patients and the medical care. The team at IHC specializes in all aspects of healthcare delivery including operations, quality, marketing, project implementation, finance, insurance, branding, legal, event management and human resources.

Exceptional functional and technical expertise coupled with extensive industry knowledge makes IHC the ideal choice for a consulting and executing firm to smoothly manage the business of healthcare with exponential growth.

Services

Our years of experience and exposure to various Health Care related projects has enabled us to provide 360° solutions to all aspects of Healthcare.

- **Online Solutions**
- **Branding & PR**
- **Sales and Marketing**
- **Hospital Management**

In India there was a time when Healthcare / hospitals were considered as not so attractive business. There was no focus on Marketing & Promotions of these hospitals. However, with the entry of corporate players like Indraprastha Group, Ranbaxy, Wockhardt, and Apollo Tyres etc the industry has undergone a paradigm shift. Today healthcare industry is one of the fastest growing industries in India and hence these corporate hospitals are leaving no stone unturned to promote their services.

However with healthcare business requiring focused and specialized approach, hospitals require specialized professional to take care of their Marketing, which of course comes at a huge cost. Indian Health

Consultants (IHC) has professionals with specialized domain knowledge in all the fields of healthcare that involves:

- Sales and Marketing
- Operations, Quality & Accreditations
- HR & Project Management
- Website Designing & Maintenance
- Medical Tourism

Why IHC

Our specific strengths to handle the healthcare business effectively make us a premium player and gives us an edge above all to be chosen as a partner.

Expert Knowledge

Knowledge is a critical factor for the success and failure of organizations. Besides having all the essential knowledge on Healthcare system, we also put our focus on the process of generation of new knowledge and innovating through informal communication within and between organizations.

Cost Effective Solutions

In today's unpredictable markets, the best way to control costs is to be in the best position to adapt to changing environment. We offer highly cost effective solutions whether you want to write a newsletter, design a brochure, develop a 30-second introduction, be a better networker, and mail a press release, **IT IS ALL THERE**. We specialise in choosing best marketing models for our clients.

Long Lasting Solutions

In the Healthcare, Brand Establishment is not achieved by too much or too less marketing. Marketing to the right customer and target audience will help achieve greater brand recall. With our detailed analysis and market insight, we help design **THE RIGHT PLAN FOR THE RIGHT TARGET**, thereby offering a long lasting solution.

Health Website Designing

The world is widely webbed and with the seamless connectivity spanning regions, countries & continents, the web-space has become a thriving platform for online business. This acts as a tool for cost-effective

marketing and client engagement. Owing to our philosophy of giving our clients **THE BEST**, we only undertake Medical Websites, the examples of which can be found in "Our Works" section.

Activities

News Articles

The team at IHC has a long healthcare experience and have successfully handled media and Public Relations at various top hospitals. We are handling the media and PR for various top end hospitals and renowned doctors. We provide complete solutions in terms of:

- Conceptualisation and creation of News stories
- We create stories and publish them online through our healthcare e-magazine www.healthinindia.net
- Widely circulating the published News stories among the target audience through email and Social Media
- Complete Media Management

Healthcare Sales & Marketing

Marketing of Healthcare is very different from any other product or service. It is a very sensitive industry and word of mouth publicity is highly critical. Obvious marketing campaigns are not looked upon nicely by the people. The healthcare marketers have to be really smart people with compassion. In-depth knowledge of healthcare industry, of diseases, treatments, equipments and comparative facilities is of paramount importance. Understanding the demographic profile of the target population is needed to design suitable marketing campaigns. Healthcare runs on doctors and branding of doctors is the most important element in healthcare marketing. Our professionals have long experience of creating successful marketing campaigns for all kinds of healthcare facilities ranging from a single doctor run clinic to the biggest tertiary care setups having all specialties and super specialties.

- Creating a Referral Physician network for continuous flow of patients
- Corporate & PSU empanelment's, Insurance Tie-ups getting the best rates for our clients
- Public outreach programmes, camps, health talks, healthcare service exchange tie-ups
- Managing the Credit business for the health facilities - Tie-up and Recovery
- Creating the international business network
- Creating systems for managing the various segments of healthcare marketing - referral, institutional, international and direct
- Complete branding for the health facility - internal and external signages, brochures, leaflets, advertisements, hoardings, websites, online publicity, doctor profiles.
- Creating the tariff list for the services based on the facilities and infrastructure available keeping the competition in mind

Medical Events

Indian Health Consultants does the complete event management for events of all magnitudes - National & International conferences, CME's for promotion of doctors or the facilities. The team at IHC takes complete responsibility for the successful organization of the event. We have the experience of organizing more than 150 such events including international level conferences. We organize the following events:

- International and National Conferences
- CME for Hospitals and Doctors in the target audience
- Inauguration or Launch of a facility
- Press Conferences

Indian Health Consultants offers end to end solutions for the organization of any such event taking complete care of the all the functions involving in such events. We also assist the organizers in the process of revenue generation for such events. Our involvement should ideally start at the stage of conceptualization of the event for better results.

Advantage

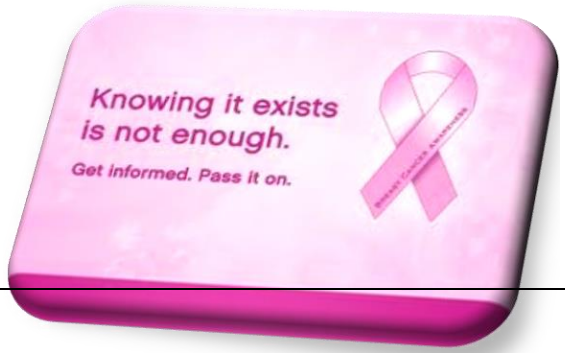
Our specific strengths to handle the healthcare business effectively and efficiently give us the cutting edge over others

- ***Expert Knowledge***
- ***A combined experience of over 50 years in Healthcare***
- ***Cost Effectiveness***
- ***Lasting Solutions***
- ***Result Oriented Strategy Formulation and Implementation***

To explore the factors that influence GP consultation by women with breast cancer symptoms.

DR VEERA SARDANA

Delayed presentation of symptomatic breast cancer of three months or more is associated with lower survival rates from the disease, yet 20% to 30% of women wait at least three months before consulting their general practitioner (GP) with breast symptoms



PART 2

INTERNSHIP REPORT

A **general practitioner** (GP) is a medical practitioner who treats acute and chronic illnesses and provides preventive care and health education for all ages and all sexes. They have particular skills in treating people with multiple health issues and co morbidities.

The term *general practitioner* or *GP* is common in the Republic of Ireland, the United Kingdom and several Commonwealth countries

OR

A general practitioner is a medical doctor who provides comprehensive general care to patients, rather than focusing on a specific organ system, family of conditions, or type of medical issue. Many people use a general practitioner for their primary care, and general practitioners are usually the first point of contact with the medical system for patients. Training to become a general practitioner requires attending medical school and completing a residency in family medicine.

SUMMARY

Background: Delayed presentation of symptomatic breast cancer of three months or more is associated with lower survival rates from the disease, yet 20% to 30% of women wait at least three months before consulting their general practitioner (GP) with breast symptoms.

Aim: To explore the factors that influence GP consultation by women with breast cancer symptoms.

Design of study: Qualitative analysis of semi-structured interviews.

Setting: Forty-six women with newly diagnosed breast cancer.

Method: Interviews were conducted eight weeks after diagnosis.
Of breast cancer, comparing two groups of women divided according to the extent of delay between onset of symptoms and seeking medical care. Fifteen women had sought advice from their GP within two weeks of symptom discovery (‘non-delayers’) and 31 had waited 12 weeks or more before seeing their doctor (‘delayers’).

Results: Women with breast symptoms who presented promptly to GPs recognised the seriousness of the symptom they had discovered more quickly than delayers. Perception of seriousness was influenced by the nature of the initial symptom and how far it matched the individual’s expectations of breast cancer as a painless breast lump.
Other factors affecting help-seeking included attitudes to GP attendance, beliefs about the consequences of cancer treatment, and perceptions of other priorities taking precedence over personal health.

Conclusions: This analysis suggests that women need further information about the different types of breast cancer symptoms to assist symptom recognition, as well as encouragement to seek medical advice if a symptom is ambiguous. In addition, women may benefit from greater awareness of the benefits of early detection and reassurance about the improvements in quality of breast cancer care.

Keywords: breast cancer; symptoms; consultation; delay.

CHAPTER 1

Introduction

DELAYED presentation of symptomatic breast cancer of three months or more is associated with lower survival rates from this disease. While some of this delay is health provider-related, an estimated 20% to 30% of women wait at least three months before seeking medical help with breast symptoms. A recent fall in deaths from breast cancer has been reported, owing to improved survival from a combination of earlier diagnosis, breast screening, and better treatment. The relative contribution of these factors remains to be evaluated. In the meantime, breast cancer mortality continues to represent a major public health problem and further gains in survival might be achieved by encouraging women who delay presenting to seek help more quickly. It is therefore important to understand the factors that influence patient delay and to develop strategies for reducing it. This qualitative analysis was undertaken to examine important beliefs and attitudes associated with medical help-seeking that were not easily accessible using a quantitative approach. Qualitative methodology has been used effectively with other illnesses to identify key influences on patients' decisions to consult their GP.

What is breast cancer?

Cancer is a group of diseases that cause cells in the body to change and grow out of control. Most types of cancer cells eventually form a lump or mass called a tumour, and are named after the part of the body where the tumour originates.

Breast cancer begins in breast tissue, which is made up of glands for milk production, called lobules, and the ducts that connect the lobules to the nipple. The remainder of the breast is made up of fatty, connective, and lymphatic tissue.

• Most masses are benign; that is, they are not cancerous, do not grow uncontrollably or spread, and are not life-threatening.

• Some breast cancers are called in situ because they are confined within the ducts (ductal carcinoma in situ or DCIS) or lobules (lobular carcinoma in situ or LCIS) where they originated. Many oncologists believe that LCIS (also known as lobular neoplasia) is not a true cancer, but an indicator of increased risk for developing invasive cancer in either breast.

- The majority of in situ breast cancers are DCIS
- LCIS is much less common than DCIS

- Other in situ breast cancers have characteristics of both ductal and lobular carcinomas or have unspecified origin

- Most breast cancers are invasive, or infiltrating. These cancers started in the lobules or ducts of the breast but have broken through the duct or glandular walls to invade the surrounding tissue of the breast.

TYPES OF BREAST CANCER

- In situ
- Intraductal (DCIS)
- Intralobular (LCIS)
- Invasive
- Infiltrating ductal carcinoma
- Tubular carcinoma
- Medullary carcinoma
- Mucinous carcinoma

Breast cancers are described along four different classification schemes, or groups, each based on different criteria and serving a different purpose:

- **Pathology** - Each tumour is classified by its histological (microscopic anatomy) appearance and other criteria.
- **Grade of tumour** - The histological grade of a tumour is determined by a pathologist under a microscope. A "well-differentiated" (low grade) tumour resembles normal tissue. A "poorly differentiated" (high grade) tumour is composed of disorganized cells and, therefore, does not look like normal tissue. "Moderately differentiated" (intermediate grade) tumors are somewhere in between.
- **Protein & gene expression status** - Currently, all breast cancers should be tested for expression, or detectable effect, of the estrogen receptor (ER), progesterone receptor (PR) and HER2/neu proteins. These tests are usually done by immunohistochemistry and are presented in a pathologist's report. The profile of expression of a given tumour helps predict its prognosis, or outlook, and helps an oncologist choose the most appropriate treatment. More genes and/or proteins may be tested in the future.
- **Stage of a tumour** - The currently accepted staging scheme for breast cancer is the TNM classification. This considers the **T**umour itself, whether it has spread to lymph **N**odes, and whether there are any **M**etastases to locations other than the breast and lymph nodes.

While clinical assessment clues (such as findings on breast exam or breast imaging results) may be strongly suggestive of a cancer diagnosis, microscopic analysis of breast tissue is necessary for a definitive diagnosis of breast cancer and to determine whether the cancer is in situ or invasive and lobular or ductal. The microscopic analysis can be obtained via a needle biopsy or a surgical biopsy. Selection of the type of biopsy is based on individual factors and availability.

The seriousness of invasive breast cancer is strongly influenced by the stage of the disease; that is, the extent or spread of the cancer when it is first diagnosed. There are two main staging systems for cancer. The TNM classification of tumors uses information on tumour size and how far it has spread within the breast and nearby organs (T), lymph node involvement (N), and the presence or absence of distant metastases (spread to distant organs) (M)

A simpler system used for staging of cancers is known as the Surveillance, Epidemiology, and End Results (SEER) Summary Stage system and is more commonly used in reporting by cancer registries and for public health research and planning.2 According to this system:

• Local-stage tumors are cancers confined to the breast.

• Regional-stage tumors have spread to surrounding tissue or nearby lymph nodes.

• Distant-stage cancers have metastasized (spread) to distant organs.

As the biologic properties of breast cancer have become better understood, molecular markers (including hormone receptor status and HER2 expression) are increasingly used in addition to stage information for prognosis and treatment

What are the signs and symptoms of breast cancer?

Breast cancer typically produces no symptoms when the tumour is small and most treatable. Therefore, it is very important for women to follow recommended screening guidelines for detecting breast cancer at an early stage, before symptoms develop. When breast cancer has grown to a size that can be felt, the most common physical sign is a painless lump. Sometimes breast cancer can spread to underarm lymph nodes and cause a lump or swelling, even before the original breast tumour is large enough to be felt. Less common signs and symptoms include breast pain or heaviness; persistent changes to the breast, such as swelling, thickening, or redness of the breast's skin; and nipple abnormalities such as spontaneous discharge (especially if bloody), erosion, inversion, or tenderness. It is important to note that pain (or lack thereof) does not indicate the presence or the absence of breast cancer. Any persistent abnormality in the breast should be evaluated by a physician as soon as possible.

- ***Puckering***
- ***Dimpling***

- ***Retraction***
- ***Nipple discharge***
- ***Thickening of skin or lump or "knot"***
- ***Retracted nipple***
- ***Change in breast size***
- ***Pain or tenderness***
- ***Redness***
- ***Change in nipple position***
- ***Scaling around nipples***
- ***Sore on breast that does not heal***

Who gets breast cancer?

Sex•

Excluding cancers of the skin, breast cancer is the most common cancer among women, accounting for nearly 1 in 3 cancers diagnosed in US women.• Men are generally at low risk for developing breast cancer; however, they should report any change in their breasts to a physician.

Age•

Breast cancer incidence and death rates generally increase with age. Ninety-five percent of new cases and 97% of breast cancer deaths occurred in women 40 years of age and older.• During 2004-2008, among adult women, those 20-24 years of age had the lowest incidence rate, 1.5 cases per 100,000 women; women 75-79 years of age had the highest incidence rate, 421.3 cases per 100,000. The decrease in incidence rates that occurs in women 80 years of age and older may reflect lower rates of screening, the detection of cancers by mammography before 80 years of age, and/or incomplete detection.

What are the known risk factors for breast cancer?

Many of the known breast cancer risk factors such as age, family history, early menarche, and late menopause, are not modifiable. However, other factors associated with increased breast cancer risk, including postmenopausal obesity, use of combined estrogen and progestin menopausal hormones, alcohol consumption, and physical inactivity, are modifiable. Some risk factors directly increase lifetime exposure of breast tissue to hormones (early menarche, late menopause, obesity, and hormone use), whereas others, such as higher socioeconomic status, are only correlates of reproductive behaviour or other factors.

The desire to explain the causes of breast cancer has led to a wide range of proposed explanations that target common exposures, including underwire bras and antiperspirants. At present, there is no conclusive

scientific evidence that shows an association between these products and breast cancer. Likewise, no association has been found between breast implants and an increased risk of breast cancer; however, there is growing concern that women with implants may be at increased risk of a rare type of lymphoma. There are also persistent claims that women who have had an abortion are at an increased risk for developing breast cancer based on early studies that have since been deemed by the American College of Obstetricians and Gynaecology to be methodologically flawed.

Concerns have also been raised among some advocacy groups and survivors that rising breast cancer incidence in the latter half of the 20th century may be caused by environmental pollutants such as organ chlorine pesticides, but studies to date have not found increased concentrations of organ chlorines, when measured in adults, to be related to breast cancer risk. Although animal studies have demonstrated that prolonged high-dose exposure to many industrial chemicals can increase mammary tumors, it is more difficult to determine whether much lower concentrations of these chemicals – which occur alone or in combination, in air, drinking water, and consumer products – increase the risk of human breast cancer. In general, epidemiological studies have not found clear relationships between environmental pollutants and breast cancer, but these studies have had limited capability to study effects on subgroups.

Clinical factors

High breast tissue density (a mammographic indicator of the amount of glandular tissue relative to fatty tissue in the breast) has been shown to be a strong independent risk factor for the development of breast cancer. Breast density is largely influenced by inherited genetic factors, but decreases with age and is further reduced by pregnancy and menopause. Women with the highest levels of breast density have consistently been found to have a 4- to 6-fold increased risk of breast cancer compared to women with less dense breasts. In addition, mammographic detection of breast cancer is impaired for dense breast tissue.

High bone mineral density in postmenopausal women also has been recognized as a risk factor for breast cancer in most studies. Bone density is routinely measured to identify women at increased risk for osteoporosis (high bone density indicates absence of osteoporosis) and may help determine a woman's risk for developing breast cancer. The association between bone density and breast cancer is probably mediated by hormonal factors.

Some types of benign breast conditions are more closely linked to breast cancer risk than others. Doctors often categorize benign breast conditions into 3 general groups, reflecting the degree of risk: non-proliferative lesions, proliferative lesions without atypia, and proliferative lesions with atypia. Non-proliferative lesions are not associated with overgrowth of breast tissue and have little to no effect on breast cancer risk. Proliferative lesions without atypia (those with excessive growth of cells in the ducts or lobules of the

breast tissue) are associated with a small increase in the risk of breast cancer (1.5 to 2 times normal). Proliferative lesions with atypia (those with excessive growth of abnormal cells in the ducts or lobules of the breast tissue) are associated with the greatest breast cancer risk – 4 to 5 times that of average-risk women. They include atypical ductal hyperplasia (ADH) and atypical lobular hyperplasia (ALH). Women should keep detailed records of any benign breast biopsy results, as this will be useful information in the event of a future breast cancer diagnosis.

Hormonal factors

Reproductive hormones are thought to influence breast cancer risk by increasing cell proliferation, thereby increasing the likelihood of DNA damage, as well as promotion of cancer growth. Early menarche (<12 years) and older age at menopause (>55 years) may increase a woman's risk of breast cancer by increasing lifetime exposure to reproductive hormones produced by her body. Postmenopausal women with high levels of endogenous hormones (estrogen or testosterone) have about twice the risk of developing breast cancer compared to women with the lowest levels. Few studies have examined this relationship in premenopausal women, and the results are mixed. One reason for the discrepancy may be due to the complexity of measuring hormone levels in premenopausal women because levels vary throughout the menstrual cycle.

Younger age at first full-term pregnancy (<30 years) and a greater number of pregnancies decrease the risk of breast cancer over the long term; however, there also appears to be a transient increase in breast cancer risk following a full-term pregnancy, particularly among women who have a first birth at older ages. Interestingly, recent studies suggest that reproductive patterns are more strongly associated with risk of hormone receptor-positive breast cancer compared

to triple-negative breast cancer. Breastfeeding has been shown to decrease a woman's risk of breast cancer, with greater benefit associated with longer duration.

Family history of breast cancer and genetic predisposition

Women with a family history of breast cancer, especially in a first-degree relative (mother, sister, daughter, father, or brother), are at increased risk of developing breast cancer and the risk is higher if more than one first-degree relative developed breast cancer. Compared to women without a family history, risk of breast cancer is 1.8 times higher for women with one first-degree female relative who has been diagnosed, nearly 3 times higher for women with two relatives, and nearly 4 times higher for women with three or more relatives. Risk also increases the younger the relative was at the time of diagnosis. It is important to note that the majority of women with one or more affected first-degree relatives will never develop breast cancer and that most women who develop breast cancer do not have a first-degree relative with the disease. A family history of ovarian cancer is also associated with an increased risk of breast cancer. Women with a

family history of breast or ovarian cancer in their mothers, sisters, daughters, aunts, or grandmothers or a male relative with breast cancer should discuss this history with their physicians.

Radiation

The link between radiation exposure and breast cancer has been demonstrated in studies of atomic bomb survivors and women who have received high-dose radiation therapy to the chest, particularly those who were first exposed at younger ages. Among atomic bomb survivors, increased risk of breast cancer was greatest among women exposed during adolescence. The development period when the terminal ducts and lobules of the breast have not completed differentiation may be a time of increased susceptibility to carcinogens (cancer-causing agents).

Breast cancer is one of the most common types of second cancers among childhood cancer survivors. Secondary breast cancer is most strongly associated with high-dose radiation therapy to the chest for women treated between 10 and 30 years of age, such as for Hodgkin lymphoma.

Diet

Numerous studies have examined the association of dietary components (including fat, soy, dairy, meat, and fruits and vegetables) with breast cancer risk; however, no clear link has been found for any of these

Obesity

Obesity increases the risk of postmenopausal breast cancer, but appears to protect against breast cancer before menopause. In postmenopausal women, circulating estrogen is primarily produced in fat tissue. Thus, having more fat tissue increases estrogen levels and the likelihood of developing breast cancer

Physical activity

Growing evidence supports a modest protective effect of physical activity on breast cancer risk, with stronger evidence for postmenopausal than premenopausal women. The reduction in risk is similar for both moderate and vigorous activity. The underlying mechanism of this potential protection is not well understood, although it has been hypothesized that the benefit may be due to the effects of physical activity on body mass, hormones, and energy balance.

Pathophysiology of Breast Cancer

Breast cancer, like other cancers, occurs because of an interaction between the environment and a defective gene. Normal cells divide as many times as needed and stop. They attach to other cells and stay in place in tissues. Cells become cancerous when mutations destroy their ability to stop dividing, to attach to other cells and to stay where they belong.

Normal cells will commit cell suicide (apoptosis) when they are no longer needed. Until then, they are protected from cell suicide by several protein clusters and pathways. One of the protective pathways is the PI3K/AKT pathway; another is the RAS/MEK/ERK pathway. Sometimes the genes along these protective pathways are mutated in a way that turns them permanently "on", rendering the cell incapable of committing suicide when it is no longer needed. This is one of the steps that cause cancer in combination with other mutations. Normally, the PTEN protein turns off the PI3K/AKT pathway when the cell is ready for cell suicide. In some breast cancers, the gene for the PTEN protein is mutated, so the PI3K/AKT pathway is stuck in the "on" position, and the cancer cell does not commit suicide.

Mutations that can lead to breast cancer have been experimentally linked to estrogen exposure.

Failure of immune surveillance, the removal of malignant cells throughout one's life by the immune system. Abnormal growth factor signalling in the interaction between stromal cells and epithelial cells can facilitate malignant cell growth. In breast adipose tissue, over expression of leptin leads to increased cell proliferation and cancer.

How can breast cancer be detected early?

American Cancer Society guidelines for the early detection of breast cancer vary depending on a woman's age, and include mammography and clinical breast examination (CBE), as well as magnetic resonance imaging (MRI) for women at high risk.

Mammography

Mammography is a low-dose x-ray procedure that allows visual-ization of the internal structure of the breast. Modern, dedicated screen-film units result in higher-quality images with a considerably lower x-ray dose than the general-purpose x-ray equipment used in the past, and newer, digital mammography systems appear to be even more accurate for women under 50 years of age with dense breast tissues

Early detection of breast cancer by mammography also leads to a greater range of treatment options, including less-aggressive surgery (e.g., lumpectomy vs. mastectomy) and less-aggressive adjuvant therapy.

However, mammography does have limitations. Not all breast cancer will be detected by a mammogram, and some breast cancers detected by mammography may still have poor prognosis. Also, a small percentage of breast cancers detected by screening, particularly ductal carcinoma in situ would not have progressed and thus may be treated unnecessarily. Furthermore, mammography sometimes leads to follow-up examinations, including biopsies that are often determined not to be cancer; these are referred to as false-positive test results.

Despite these limitations, mammography is the single most effective method of early detection since it can identify cancer several years before physical symptoms develop. It is the position of the American Cancer

Society that the balance of benefits to possible harms strongly supports the value of regular breast cancer screening in women who are older than 40.

There is no specific age at which mammography screening should be discontinued. Rather, the decision to stop regular mammography screening should be individualized based on the potential benefits and risks of screening within the context of overall health status and estimated longevity. As long as a woman is in good health and would be a candidate for breast cancer treatment, she should continue to be screened with mammography.

Magnetic resonance imaging (MRI)

MRI uses magnetic fields instead of x-rays to produce very detailed, cross-sectional images of the body. MRI exams for breast imaging use a contrast material (usually gadolinium DTPA) that is injected into a small vein in the arm before or during the exam. This improves the ability of the MRI to capture detailed images of breast tissue. For certain women at high risk for breast cancer based on the previously outlined criteria, a screening MRI is recommended along with a yearly mammogram beginning at age 30. MRIs should supplement, but not replace, mammography screening.

Clinical breast examination (CBE)

For average-risk asymptomatic women in their 20s and 30s, it is recommended that a breast exam be a part of a regular health examination, preferably at least every 3 years. For women 40 years of age and older, annual CBE can be an important complement to mammography, since a small percentage of cancers may be missed by mammography.

Preferably, women should have their CBE shortly before their annual mammogram. For CBE, the woman undresses from the waist up. Using the pads of the fingers, the examiner gently feels the breasts, giving special attention to shape,

Texture, location of any lumps, and whether such lumps are attached to the skin. The breasts should also be inspected for skin changes (e.g., dimpling, redness) and asymmetry. The area under both arms will also be examined. CBE is also an opportunity for a woman and her health care provider to discuss changes in her breasts, early detection testing, review and update family history information, as well as answer any questions she may have about her own risk, new technologies, or other matters related to breast cancer.

Breast self-awareness

All women should become familiar with both the appearance and feel of their breasts to detect any changes and report them promptly to their physician. Although the American Cancer Society no longer recommends

that all women perform monthly breast self-exams (BSE), women should be informed about the potential benefits and limitations associated with BSE. Research has shown that self-awareness seems to be more effective for detecting breast cancer than structured BSE. Women who detect their own breast cancer usually find it outside of a structured breast self-exam while bathing or getting dressed. A woman who wishes to perform periodic BSE should receive instruction from her health care provider and/or have her technique reviewed periodically.

If symptoms develop, women should contact their doctor immediately, even after a recent, normal mammogram. Lumps are not necessarily abnormal, however, and for women who are still menstruating, they can appear and disappear with the menstrual cycle. Most lumps that are detected and tested are not cancerous.

How is breast cancer treated?

Treatment decisions are made by the patient and the physician after consideration of the optimal treatment available for the stage and biological characteristics of the cancer, the patient's age and preferences, and the risks and benefits associated with each treatment protocol. Most women with breast cancer will have some type of surgery. Surgery is often combined with other treatments such as radiation therapy, chemotherapy, hormone therapy, and/or targeted therapy. Treatment guidelines from the National Comprehensive Cancer

Surgery

The primary goals of breast cancer surgery are to remove the cancer from the breast and to assess the stage of disease. In a lumpectomy, only cancerous tissue plus a rim of normal tissue is removed. Simple or total mastectomy includes removal of the entire breast. Modified radical mastectomy includes removal of the entire breast and lymph nodes under the arm, but does not include removal of the underlying chest wall muscle, as with a radical mastectomy. Radical mastectomy is rarely used due to the proven effectiveness of less aggressive and disfiguring surgeries.

If a woman chooses to have a mastectomy, she may consider having the breast reconstructed. Breast reconstruction may be done with saline-filled or silicone-filled implants or tissue from other parts of the body. A woman considering this option should discuss this with her breast surgeon prior to her mastectomy surgery as it may influence the surgical facility (inpatient vs. outpatient) and type of procedure. Breast reconstruction can be performed at the same time as the mastectomy, or it can be performed as a subsequent, separate surgical procedure.

Lumpectomy is almost always followed by radiation therapy. A woman who chooses lumpectomy and radiation will have the same expected long-term survival as if she had chosen mastectomy; however, there is a higher risk of local recurrence (cancer returning to the breast) with lumpectomy.

Both lumpectomy and mastectomy are often accompanied by removal of regional lymph nodes from the axilla, or armpit, to determine if the disease has spread beyond the breast. The presence of any cancer cells in the lymph nodes will help determine the need for subsequent therapy and the course it should take. Sentinel lymph node biopsy, in which selected lymph nodes are removed and tested before any others are excised, and reduces the need for full axillary lymph node dissections among most women with no evidence of lymph node involvement before surgery.

Radiation therapy

Radiation is used to destroy cancer cells remaining in the breast, chest wall, or underarm area after breast-conserving surgery. Radiation may also be needed after mastectomy in patients with either a cancer that is larger than 5 cm in size or when cancer is found in the lymph nodes.

There are two types of radiation therapy. External beam radiation is the usual type of radiation for women with breast cancer. Radiation is focused from a machine outside the body on the area affected by cancer. This usually includes the whole breast and, depending on the size and extent of the cancer, may include the chest wall and underarm area as well. External beam radiation therapy is typically administered over a period of 5 to 6 weeks; however, in recent studies, shortening the treatment to 3 weeks appears to be just as effective. Internal radiation therapy, known as brachytherapy, uses a radioactive substance sealed in needles, seeds, wires, or catheters that are placed directly into or near the cancer. Some patients are treated with both internal and external radiation therapies in combination. The way the radiation therapy is given depends on the type, stage, and location of the tumour being treated. The ability to target radiation therapy accurately has increased dramatically in recent decades, which has greatly diminished side effects and can also reduce treatment time.

Systemic therapy

Systemic therapy uses anti-cancer drugs that are injected into a vein or given by mouth. These drugs travel through the bloodstream to all parts of the body. Systemic therapy includes targeted therapy, chemotherapy, and hormone therapy, all of which work through different mechanisms. For example, chemotherapy drugs work by attacking cells that grow quickly, such as cancer cells. Newer targeted drugs work by attacking specific parts of cancer cells. Hormone therapy works by blocking the body’s natural hormones, which sometimes act to promote cancer growth.

Systemic treatment given to patients before surgery is called neoadjuvant therapy. It is often used to shrink the tumour enough to make surgical removal possible or allow for less extensive surgery. This may allow breast-conserving surgery in women who would otherwise have required mastectomy. Neoadjuvant therapy has been found to be as effective as therapy given after surgery in terms of survival, disease progression, and distant recurrence.

Systemic treatment given to patients after surgery is called adjuvant therapy. After visible cancer has been surgically removed, it is used to kill any undetected tumour cells that may have been left behind or migrated to other parts of the body. Tumour size, histology, and the presence of cancer in axillary nodes are considered in the decision whether to use adjuvant systemic therapy.

Targeted therapy

Approximately 15%-30% of breast cancers overproduce the growth-promoting protein HER2/neu. These tumors tend to grow faster and are generally more likely to recur than tumors that do not overproduce HER2. Tratuzumab (Herceptin) is a monoclonal antibody that directly targets the HER2 protein of breast tumors and offers a survival benefit for women with breast cancer that over express HER2. Originally used to treat metastatic breast cancer, tratuzumab has also been shown to be effective in early stage breast cancer. The combined results of two large trials indicate that adding tratuzumab to standard chemotherapy for early stage HER2-positive breast cancer reduced the risk of recurrence and death by 52% and 33%, respectively, compared to chemotherapy alone. In 2006, the US Food and Drug Administration (FDA) approved tratuzumab for all HER2-positive breast cancers. All invasive breast cancers should be tested for the HER2 gene amplification or protein over expression in order to identify women who would benefit from this therapy.

Chemotherapy

The benefit of chemotherapy is dependent on multiple factors, including the size of the cancer, the number of lymph nodes involved, the presence of estrogen or progesterone receptors, and the amount of HER2/neu protein made by the cancer cells. Research has established that, in most cases, combinations of drugs are more effective than one drug alone for breast cancer treatment. Many combinations are being used, and it is not clear that any single combination is the best. The most common drugs recommended to be used in combination in early breast cancer that is not HER2-positive are cyclophosphamide, methotrexate, fluorouracil, doxorubicin (Adriamycin), epirubicin, paclitaxel (Taxol), and docetaxol (Taxotere). Depending on the combination of drugs that is used, adjuvant chemotherapy is usually given for 3 to 6 months. Chemotherapy is most effective when the full dose and cycle of drugs is completed in a timely manner. These and other chemotherapy drugs may also be used to shrink cancer that has metastasized (spread to distant organs).

Hormone therapy

Estrogen, a hormone produced by the ovaries, promotes the growth of many breast cancers. Women whose breast cancers test positive for hormone receptors can be given a drug that is referred to as hormone therapy

to lower estrogen levels or to block the effects of estrogen on the growth of breast cancer cells. Tamoxifen and toremifene (Fareston) are

drugs that prevent estrogen from binding to breast cancer cells and are effective in in both postmenopausal and premenopausal patients. Fulvestrant (Faslodex) is a newer drug (given by injection once per month) that reduces the number of estrogen receptors on breast tumors. It is often effective in postmenopausal women even if the breast cancer is no longer responding to tamoxifen.

A class of drugs known as aromatase inhibitors (AIs) are also used in treating both early and advanced hormone receptor positive breast cancer. These drugs are letrozole, anastrozole, and exemestane. They work by blocking an enzyme responsible for producing small amounts of estrogen in postmenopausal women. AIs are not an effective treatment in premenopausal women because they cannot stop the ovaries from producing estrogen. Clinical trials have demonstrated a clear advantage to using either an AI instead of tamoxifen for a total of 5 years or switching to an AI after several years of tamoxifen, as opposed to tamoxifen alone for 5 years

American Cancer Society Guidelines for Nutrition and Physical Activity for Cancer Prevention

Maintain a healthy weight throughout life.

• Balance calorie intake with physical activity.

• Avoid excessive weight gain throughout life.

• Achieve and maintain a healthy weight if currently overweight or obese.

Adopt a physically active lifestyle.

• Adults should engage in at least 30 minutes of moderate to vigorous physical activity, above usual activities, on 5 or more days of the week; 45 to 60 minutes of intentional physical activity is preferable.

• Children and adolescents should engage in at least 60 minutes per day of moderate to vigorous physical activity at least 5 days per week.

Eat a healthy diet, with an emphasis on plant sources.

• Choose foods and drinks in amounts that help achieve and maintain a healthy weight.

• Eat 5 or more servings of a variety of vegetables and fruits each day.

• Choose whole grains over processed (refined) grains.

• Limit intake of processed and red meats.

If you drink alcoholic beverages, limit your intake.

• Women should drink no more than 1 drink per day (or 2 per day for men).

PROGNOSIS

A prognosis is a prediction of outcome and the probability of progression-free survival (PFS) or disease-free survival (DFS). These predictions are based on experience with breast cancer patients with similar classification. A prognosis is an estimate, as patients with the same classification will survive a different amount of time, and classifications are not always precise. Survival is usually calculated as an average number of months (or years) that 50% of patients survive, or the percentage of patients that are alive after 1, 5, 15, and 20 years. Prognosis is important for treatment decisions because patients with a good prognosis are usually offered less invasive treatments, such as lumpectomy and radiation or hormone therapy, while patients with poor prognosis are usually offered more aggressive treatment, such as more extensive mastectomy and one or more chemotherapy drugs.

Prognostic factors are reflected in the classification scheme for breast cancer including stage, (i.e., tumour size, location, whether disease has spread to lymph nodes and other parts of the body), grade, recurrence of the disease, and the age and health of the patient. The Nottingham Prognostic Index is a commonly used prognostic tool.

The stage of the breast cancer is the most important component of traditional classification methods of breast cancer, because it has a greater effect on the prognosis than the other considerations. Staging takes into consideration size, local involvement, lymph node status and whether metastatic disease is present. The higher the stage at diagnosis, the poorer the prognosis. The stage is raised by the invasiveness of disease to lymph nodes, chest wall, and skin or beyond, and the aggressiveness of the cancer cells. The stage is lowered by the presence of cancer-free zones and close-to-normal cell behaviour (grading). Size is not a factor in staging unless the cancer is invasive. For example, Ductal Carcinoma in Situ (DCIS) involving the entire breast will still be stage zero and consequently an excellent prognosis with a 10yr disease free survival of about 98%.

The breast cancer grade is assessed by comparison of the breast cancer cells to normal breast cells. The closer to normal the cancer cells are, the slower their growth and the better the prognosis. If cells are not well differentiated, they will appear immature, will divide more rapidly, and will tend to spread. Well differentiated is given a grade of 1, moderate is grade 2, while poor or undifferentiated is given a higher grade of 3 or 4 (depending upon the scale used). The most widely used grading system is the Nottingham scheme; details are provided in the discussion of breast cancer grade.

The presence of estrogen and progesterone receptors in the cancer cell is important in guiding treatment. Those who do not test positive for these specific receptors will not be able to respond to hormone therapy,

and this can affect their chance of survival depending upon what treatment options remain, the exact type of the cancer, and how advanced the disease is.

In addition to hormone receptors, there are other cell surface proteins that may affect prognosis and treatment. HER2 status directs the course of treatment. Patients whose cancer cells are positive for HER2 have more aggressive disease and may be treated with the 'targeted therapy', tratuzumab (Herceptin), a monoclonal antibody that targets this protein and improves the prognosis significantly.

Younger women tend to have a poorer prognosis than post-menopausal women due to several factors. Their breasts are active with their cycles; they may be nursing infants, and may be unaware of changes in their breasts. Therefore, younger women are usually at a more advanced stage when diagnosed. There may also be biologic factors contributing to a higher risk of disease recurrence for younger women with breast cancer.

Psychological aspects

The emotional impact of cancer diagnosis, symptoms, treatment, and related issues can be severe. Larger hospitals are associated with cancer support groups which provide a supportive environment to help patients cope and gain perspective from cancer survivors. Online cancer support groups are also very beneficial to cancer patients, especially in dealing with uncertainty and body-image problems inherent in cancer treatment.

Not all breast cancer patients experience their illness in the same manner. Factors such as age can have a significant impact on the way a patient copes with a breast cancer diagnosis. Premenopausal women with estrogen-receptor positive breast cancer must confront the issues of early menopause induced by many of the chemotherapy regimens used to treat their breast cancer, especially those that use hormones to counteract ovarian function.

On the other hand, a small 2007 study conducted by researchers at the College of Public Health of the University of Georgia suggested a need for greater attention to promoting functioning and psychological well-being among older cancer survivors, even when they may not have obvious cancer-related medical complications. The study found that older breast cancer survivors showed multiple indications of decrements in their health-related quality of life, and lower psychosocial well-being than a comparison group. Survivors reported no more depressive symptoms or anxious mood than the comparison group, however, they did score lower in measures of positive psychosocial well-being, and reported more depressed mood and days affected by fatigue. As the incidence of breast cancer in women over 50 rises and survival rates increase, breast cancer is increasingly becoming a geriatric issue that warrants both further research and the expansion of specialized cancer support services tailored for specific age groups.

Breast Cancer Epidemiology

Worldwide, breast cancer is the most common cancer in women after skin cancer representing 16% of all female cancers. The rate is more than twice that of colorectal cancer and cervical cancer and about three times that of lung cancer. Mortality worldwide is 25% greater than that of lung cancer in women.

The incidence of breast cancer varies greatly around the world, being lower in less-developed countries and greatest in the more-developed countries. In the twelve world regions, the annual age-standardized incidence rates per 100,000 women are as follows: in Eastern Asia, 18; South Central Asia, 22; sub-Saharan Africa, 22; South-Eastern Asia, 26; North Africa and Western Asia, 28; South and Central America, 42; Eastern Europe, 49; Southern Europe, 56; Northern Europe, 73; Oceania, 74; Western Europe, 78; and in North America, 90

As developing countries grow and adopt Western culture they also accumulate more disease that has arisen from Western culture and its habits (fat/alcohol intake, smoking, exposure to oral contraceptives, the changing patterns of childbearing and breastfeeding, low parity). For instance, as South America has developed so has the amount of breast cancer.

“Breast cancer in less developed countries, such as those in South America, is a major public health issue. It is a leading cause of cancer-related deaths in women in countries such as Argentina, Uruguay, and Brazil. The expected numbers of new cases and deaths due to breast cancer in South America for the year 2001 are approximately 70,000 and 30,000, respectively.”

However, because of a lack of funding and resources, treatment is not always available to those suffering with breast cancer.

SOCIETY AND CULTURE

Before the 20th century, breast cancer was feared and discussed in hushed tones, as if it were shameful. As little could be safely done with primitive surgical techniques, women tended to suffer silently rather than seeking care. When surgery advanced, and long-term survival rates improved, women began raising awareness of the disease and the possibility of successful treatment. The "Women's Field Army", run by the American Society for the Control of Cancer (later the American Cancer Society) during the 1930s and 1940s was one of the first organized campaigns. In 1952, the first peer-to-peer support group, called "Reach to Recovery", began providing post-mastectomy, in-hospital visits from women who had survived breast cancer.

The breast cancer movement of the 1980s and 1990s developed out of the larger feminist movements and women's health movement of the 20th century. This series of political and educational campaigns, partly inspired by the politically and socially effective AIDS awareness campaigns, resulted in the widespread acceptance of second opinions before surgery, less invasive surgical procedures, support groups, and other advances in patient care.

Pink ribbon

A pink ribbon is the most prominent symbol of breast cancer awareness. Pink ribbons, which can be made inexpensively, are sometimes sold as fundraisers, much like poppies on Remembrance Day. They may be worn to honour those who have been diagnosed with breast cancer, or to identify products that the manufacturer would like to sell to consumers that are interested in breast cancer—usually white, middle-aged, middle-class and upper-class, educated women.

The pink ribbon is associated with individual generosity, faith in scientific progress, and a "can-do" attitude. It encourages consumers to focus on the emotionally appealing ultimate vision of a cure for breast cancer, rather than on the fraught path between current knowledge and any future cures

Wearing or displaying a pink ribbon has been criticized by the opponents of this practice as a kind of slacktivism, because it has no practical positive effect and as hypocrisy among those who wear the pink ribbon to show good will towards women with breast cancer, but then oppose these women's practical goals, like patient rights and anti-pollution legislation. Critics say that the feel-good nature of pink ribbons and pink consumption distracts society from the lack of progress on preventing and curing breast cancer. It is also criticized for reinforcing gender stereotypes and objectifying women and their breasts. Breast Cancer Action launched the "Think Before You Pink" campaign, and charged that companies have co-opted the pink campaign to promote products that encourage breast cancer, such as high-fat Kentucky Fried Chicken and alcohol.

Breast cancer culture

Breast cancer culture, or pink ribbon culture, is the set of activities, attitudes, and values that surround and shape breast cancer in public. The dominant values are selflessness, cheerfulness, unity, and optimism. Appearing to have suffered bravely is the passport into the culture.

The woman with breast cancer is given a cultural template that constrains her emotional and social responses into a socially acceptable discourse: She is to use the emotional trauma of being diagnosed with breast cancer and the suffering of extended treatment to transform her into a stronger, happier and more sensitive

Person who is grateful for the opportunity to become a better person. Breast cancer thereby becomes a rite of passage rather than a disease. To fit into this mold, the woman with breast cancer needs to normalize and feminize her appearance, and minimize the disruption that her health issues cause anyone else. Anger, sadness and negativity must be silenced.

As with most cultural models, people who conform to the model are given social status, in this case as cancer survivors. Women who reject the model are shunned, punished and shamed.

The culture is criticized for treating adult women like little girls, as evidenced by "baby" toys such as pink teddy bears given to adult women.

The primary purposes or goals of breast cancer culture are to maintain breast cancer's dominance as the preeminent women's health issue, to promote the appearance that society is "doing something" effective about breast cancer, and to sustain and expand the social, political, and financial power of breast cancer activists.

CHAPTER 2

Methodology

The participants in the study were 46 women in whom a diagnosis of breast cancer had been made approximately eight weeks earlier. They were selected purposively from a cohort of 185 patients recruited consecutively into a larger study of patient and GP delay3. They included 15 patients who had presented within two weeks of symptom discovery and 31 who had delayed more than three months before presenting. This division was informed by recent evidence which suggests that the majority of women seek help within two weeks of symptom discovery and that delay greater than 12 weeks between onset and diagnosis may be detrimental to survival. The division of participants into two groups enabled exploration of any variations in attitudes and beliefs to help-seeking between those who sought help promptly and those who did not.

Data were collected using a semi-structured, open-ended interview conducted Topics to be discussed in the interview were derived from the existing literature on delayed presentation in breast cancer. The interview schedule was piloted and refined prior to the study. The interviews were non-judgmental and did not enquire directly about any delay in help-seeking; instead, it sought to gather a history from women of their experiences from symptom discovery to diagnosis and treatment. Women's thoughts and feelings about symptom discovery were explored, as was their behaviour in relation to the symptom and who they confided in or sought advice from, including close friends, family, and health professionals. The resulting interview elicited a narrative of each woman's illness from symptom discovery to treatment. Participants were assured anonymity in the writing up of research findings.

CHAPTER 3

Data analysis

Each interview was WRITTEN AS A VERBATIM with the patients' permission and transcribed verbatim. Data were analysed using the 'framework' method of qualitative data analysis. Transcripts were studied repeatedly to identify and list important and recurrent themes in women's accounts of their experiences

CHAPTER 4

Results

Qualitative analysis suggested that the help-seeking process is influenced by a mixture of knowledge, perceptions, beliefs, and attitudes, including: (a) the process of symptom interpretation; (b) attitudes towards attending a GP; (c) beliefs and fears about the consequences

Of medical help-seeking; and (d) perceptions of competing priorities. In addition, it was possible to ascertain factors associated with eventual help-seeking in those who delayed. Each of these themes will be discussed separately, although there is clearly some overlap between them.

(a) Interpretation of symptoms.

'I never realised there was anything wrong. Because I couldn't feel a lump and the only thing I knew about breast cancer was you should feel a lump … there was an inversion of the nipple ... but I never knew that was a symptom.' (Delayer.)

'Every time I ... tested myself there were no lumps, it was just that there was this dent down my breast.' (Delayer.)

This belief is borne out by their help-seeking behaviour once a breast lump did appear which often provoked eventual presentation to a GP. In contrast, non-delaying patients were more likely to have discovered a symptom which matched their expectations of breast cancer presentation — namely a 'pea-shaped breast lump'

Non-delayers experienced far less ambiguity about the implications of their symptom discovery and expressed more concern that the change they found might represent a serious health threat:

For those women who delayed despite having found a breast lump, the precise nature of this lump was sometimes reported as ambiguous and failed to meet expectations of what a breast cancer lump would feel like:

(b) Attitudes to general practitioner attendance

Another major theme to emerge from the data related to feelings about when it was justified or appropriate to request an appointment with a GP. The accounts of those who delayed consulting a GP reflected many more inhibitions about 'bothering' the doctor with something that might prove to be trivial, than the non-delaying group:

(c) Beliefs about consequences of cancer treatment

Some of those who delayed seeing their doctor reported past experiences of cancer in which a loved one had died a protracted or painful death. Although this event may have occurred many years ago and the woman may acknowledge that ‘things have changed since’, the memory remains nonetheless

(d) Perception of competing priorities

A theme running through many of the accounts of women who had delayed help seeking related to the effect of competing events and difficulties, which were prioritised over and above their personal health. These comprised problems relating to other members of the family, work, and holidays. Some of those who cited domestic problems were aware that their symptom might be serious but nevertheless felt too busy to arrange a medical appointment. For some, it seemed to reflect a tendency to place the needs of others above their own.

CHAPTER 5

Discussion

This study suggests that the most important stage in the help-seeking process for women with breast cancer is the initial one, where the patient identifies and labels the symptom. The analysis indicates that symptoms which fail to match the expectations of breast cancer presenting as a discrete breast lump may contribute to the delay in seeking treatment. This supports findings from quantitative studies that non-lump symptoms are associated with patient delay and suggests that the public perception of the presenting symptoms of breast cancer may need to be broadened. Any intervention aimed at achieving this would need to be informed by further, larger scale studies to confirm these qualitative findings. Further research is also required to determine the predictive value of individual breast symptoms in predicting or excluding breast cancer. Educational messages would need to be designed with some care so as not to cause undue alarm among women and an overload of referrals and demands for consultations in both primary and secondary care.

Despite believing the symptom could be cancer, some women delayed seeing a doctor because they feared the consequences of medical intervention. These fears had often been influenced by past experiences of cancer in relatives or friends. Current health education about cancer tells us how to identify cancer symptoms but provides little information about the consequences of a cancer diagnosis. There may be some benefit in reassuring women of the benefits of early treatment on prognosis, that surgery is minimal if the cancer is diagnosed early enough, and that there have been advances in the management of the side-effects of chemotherapy. Such education would need to be informed by more data on current beliefs and attitudes about breast cancer and its treatments in the general population. Similar findings emerge from the breast cancer screening literature which suggests that attendees for screening have more faith in the health care system than non-attendees, perceiving positive, rather than negative, consequences as the likely outcome of screening.16 Fear of hospitals, operations, and medical tests has been identified as a major barrier to help seeking with angina.

The results of this qualitative work provide some clear hypotheses to be tested in large scale quantitative studies: namely that help seeking is influenced by symptom interpretation, and attitudes towards GP attendance and beliefs about the consequences of cancer treatments. If confirmed, these findings suggest implications for the education of the general population and perhaps also of primary health care teams and family planning clinics.

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