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Coping Process Against Familial Breast Cancer by Second Patients within Blood Relatives

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Introduction

Women with a family history of breast cancer are at increased risk of developing breast cancer themselves. Having one first-degree relative (i.e., a parent, child, brother, or sister) who has experienced breast cancer increases the risk by 1.8 times relative to the risk with no first-degree relative; with two and three first-degree relatives, the risk is increased by 2.9 and 3.9, respectively (Collaborative Group on Hormonal Factors in Breast Cancer, 2001).

Breast cancer is classified into three types according to heritability: hereditary breast cancer, caused by gene mutation in a reproductive cell; familial breast cancer, experienced by multiple blood relatives, regardless of heredity; and sporadic breast cancer, which is neither hereditary nor familial. Familial breast cancer accounts for 15%-20% of all breast cancers (Ochi & Yamauchi, 2017). Of those with familial breast cancer, 26.7% test positive for the BRCA gene (a breast cancer susceptibility gene located at the 17th chromosome) and are diagnosed with hereditary breast cancer (Sugano et.al., 2008). Approximately 70% of BRCA1-positive breast cancers are triple-negative, in which the cancer cells test negative for estrogen and progesterone receptors and excessive human epidermal growth factor receptor type 2 (HER2) (Nakamura, 2012). Triple-negative breast cancer is highly malignant and difficult to treat because its growth is not supported by hormones, so hormone therapy is ineffective. Triple-negative breast cancer is, in general, highly malignant and difficult to treat because hormone therapy or HER2-targeting drugs are ineffective. Furthermore, this type of breast cancer is often found in women younger than 34 years old, whose prognosis is poorer compared to those older than 35 years (Ohno, 2013). Women with hereditary breast and ovarian cancer syndrome (HBOC), a predisposition to a hereditary cancer caused by BRCA1/BRCA2 gene mutation, have 6 times the risk of developing breast cancer during their lifetime than women without the syndrome (Ochi & Yamauchi, 2017).

Thus, the characteristics of familial breast cancer include having multiple breast cancer patients among blood relatives, and those for hereditary breast cancer include development at a younger age and often high levels of pathological malignancy, such as with triple-negative breast cancer. An important issue with familial breast cancer is the need to support healthy female blood relatives of the patient because of their relatively high risk of developing the cancer. This is especially important for cancers that occur in young adults or have high malignancy. Early detection and treatment is important, because this makes the planning treatment strategy easier and reduces mortality, which is especially important for young women who may be about to experience life events such as marriage, pregnancy, and child-rearing. When a patient is identified as having familial breast cancer, therefore, we should consider the whole family line that shares the patient's genetic information.

When a second patient among blood relatives is diagnosed with breast cancer, familial breast cancer should be suspected. Familial breast cancer is defined either by three or more breast cancer patients among first-degree relatives or by two breast cancer patients among first-degree relatives of whom one is aged <40 years (early-onset), exhibits bilateral breast cancer, or has metachronous multi-organ duplication cancer (Nomizu, 1996). The diagnosis of a second breast cancer patient within blood relatives does not necessarily imply familial breast cancer, but the possibility of familiar breast cancer is increased, and support for the patient's relatives should start on that basis so that the relatives receive the information and clarification they need as

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soon as possible. The second, second patient within blood relatives were watched proband's fighting life as her family, and she is cancer patients. When a patient understands that her cancer is not sporadic breast cancer, she can inform the appropriate information to relatives within her blood family line. Because the second patient to be diagnosed has a three-way standing position, as a member of the cancer-prone family, a cancer patient and an educator to persons who are yet to be diagnosed, she is key to the preventive approach for the family. We must therefore understand the experience of the second patient to be diagnosed and support her as a key person for protecting other family members.

There has been recent progress in genome medicine for hereditary breast cancer. The U.S. National Comprehensive Cancer Network (NCCN) guidelines recommend genetic counseling about the screening criteria, genetic testing, the surveillance of high-risk patients, preventive risk reduction surgery, and preventive drug administration (NCCN Clinical Practice Guidelines in Oncology, 2019). In Japan, companion diagnostic tests (a type of genome testing) are being applied to investigate the effectiveness of poly (ADP-ribose) polymerase (PARP) inhibitors against the recurrence or metastasis of BRCA-positive breast cancers.

Although researchers understand the effectiveness of genome medicine for hereditary breast cancer, for the present study we focused on familial breast cancer, which is broader than hereditary breast cancer to inform the patients' relatives about their increased risk of familial breast cancer, and to provide them with support. There are three reasons for approach. First, addressing hereditary breast cancer patient requires genetic testing and a diagnosis of heritability, which can bring psychological difficulties. As of 2019 in Japan, companion diagnostics for PARP inhibitors is covered by medical insurance (AstraZeneca., 2019), whereas genetic testing for the patient and family is not. The genetic testing can therefore be an economic burden and can take time, but also until the results are obtained, this can present psychological difficulties for the family members. Because there is the possibility that the familial cancer is early onset and/or of high malignancy, the process of informing and supporting the relatives should be started as soon as possible. The second reason is that the NCCN's screening criteria for genetic counseling includes 'containing pancreatic cancer within blood relatives'; this is based on medical and professional evidence, but it may be difficult to understand for a patient without professional knowledge, especially if she is the first to be diagnosed and may be unsure why her family members are suspected of being at risk of heritability. Conversely, the heritability risk is easier to understand when a second family member receives a diagnosis of breast cancer, even for patients with little medical knowledge, and family members are generally more ready to receive information. The third reason is that, although there have been rapid advances in genome medicine, all genes related to breast cancer may not yet have been discovered. Thus, it may be important to immediately support the second patient who bears a higher risk for familial breast cancer in order to reduce missing patients potentially at risk from these undiscovered mutations.

The final goal of our project is to establish support for family members at risk of familial breast cancer. It is important for family members to develop coping strategies to enhance their adaptability so that the family line including healthy members can overcome demerits by taking over the gene and can continue. For this purpose, it is necessary to investigate nursing strategies based on the experience of the second family members to be diagnosed who have a three-way standing position. However, there have been few previous studies about such experience in familial and hereditary breast cancer, including the studies on a young daughter (Johnson & Pascal, 2016), sisters (Metcalfe et al., 2013; Phillips & Cohen, 2011), and female family members (Hartman et al., 2015; Lancaster, 2005; Chalmers et al., 2003; Martin & Degner, 2006; Neise et al., 2001). In addition, there have been reports of the experience of suffering among blood relatives (Metcalfe et al., 2013), the meaning of heritability (Maheu, 2009), and the relationship between risk, preventive behavior, and coping (Lancaster, 2005; Martin & Degner, 2006; Neise et al., 2001; Hartman et al., 2015; Cabrera et al., 2009). However, there have been no previous studies about the experiences of the second patient who has a three-way standing position; therefore, this new study was designed to evaluate the experiences of such family members.

Purpose of the study

The purpose of the study is to clarify the coping process against familial breast cancer by the second patient within blood relatives to be diagnosed with breast cancer, and to discuss nursing strategies to enhance adaptation in a consanguineous family through support of the second patient.

Methods

Ⅰ. Definition of terms

1. Second patient in a consanguineous family: The second patient

among first-degree relatives to be diagnosed with breast cancer and with no evidence of a third patient.
2. Familial breast cancer: Familial breast cancer was used to include the suspected cases of it.
3. Proband: The first person to be diagnosed with breast cancer in our participants' consanguineous family.
4. Non-patient relatives: Healthy females in a participants' family with possible familial breast cancer.
5. Coping process: According to the Cambridge dictionary (2019), "attitude" is defined as how you think or feel about something, and "coping" is defined as doing something well in a difficult situation. The term "coping process" thus refers to how one should think or feel in a certain situation (attitude), how one should eventually do something well in a difficult situation (coping), and how these change over time. Thus, in this study, the coping process is presented as a sequence of attitude and coping categories with proband's and own cancer.

Ⅱ. Participants

Patients were selected based on the following four criteria.
1. The second breast cancer patient among first-degree relatives.
2. Survivors entering the plateau phase without recurrence or metastasis. Survivors in plateau are defined as those that have completed initial treatment and follow-up, or if hormone receptor-positive, patients on continued endocrine therapy. Recurrent and metastatic patients were excluded because we wanted to focus on attitude and coping with familial breast cancer rather than thoughts of death and experiences associated with declining physical condition.
3. Patients with the cognitive capacity to describe/discuss their own experiences.
4. They were Japanese. Because this was a qualitative study, it was important for the participants to be able to understand the language, context, medical system, and cultural background. The Japanese researcher interviewed all the participants in Japanese.
5. Agreeing to participate in the study and providing written consent.

Ⅲ. Data collection

1. Participant enrollment

The doctor in charge at the research cooperation facility introduced the researchers to candidates for this study. The researcher confirmed with the doctor that there had been no significant change in the patient's pathological conditions, and then explained to the candidate about the purpose and methods of the study, and ethical consideration. In addition, we explained to the candidate that if she wished not to participate or subsequently to withdraw from the study, but she felt unable to say this to the researcher, there were other people she could inform about this. We guaranteed she would not be under any disadvantage if she did not participate or withdrew.

2. Method of data collection

Data was corrected via semi-structured interview by researcher's native language. We listened with empathy using an interview guide to promote openness and truthfulness of the participants. We added open-ended questions to allow elaboration by the speaker beyond direct answers. We made word-for-word recording with participants' permission. Interviews were carried out from August 2016 to December 2017.

3. The interview guide questions

1) Before breast cancer diagnosis, what were your attitudes toward breast cancer, and how did you cope? Why did you do so?
2) What were your attitudes toward the proband's breast cancer, and how did you cope? Why did you do so?
3) What were your attitudes toward your own breast cancer, and how do you cope? Why do you do so?
4) What were your attitudes toward becoming multiple breast cancer patients in your family, and how do you cope? Why do you do so?

Ⅳ. Analysis

Qualitative and inductive analysis methods were applied. We read the word-for-word records thoroughly and conducted a three-step analysis by researcher's native language: 1) analysis of attitude, 2) analysis of coping, and 3) combining the attitude and coping categories of the second patients and outlining the second patient's coping process. Finally, we performed a back translation to check the context was correctly understood and that the categories had been translated accurately from Japanese to English.

1. Analysis of attitude for multiple patients with breast cancer within blood relatives

1) Point-of-view about attitude analysis and answering the question, "How does the second patient think or feel about her own cancer, the proband's cancer, and about multiple people within blood relatives being diagnosed with breast cancer?"
After careful reading, we extracted statements regarding the

point-of-view of analysis from all participants' word-for-word records.

2) We gathered sentences with similar meanings and made sub-categories.

3) We then gathered sub-categories with the same meanings and made categories. In this document, categories of attitude are shown as [1.***][2.***].

2. Analysis of coping for multiple patients with breast cancer within blood relatives

1) Point-of-view about coping analysis is to answer the question, "How does the second patient cope with her own cancer, with the proband's cancer, and with the fact that multiple people within blood relatives might be diagnosed with breast cancer?"

2) After careful reading, we extracted statements regarding the point-of-view of analysis from all participants, and made sub-categories and categories. Procedure of analysis of coping was same as that for analysis of attitude. In this document, categories of coping are shown as 〈A.***〉〈B.***〉.

3. Synthesizing the attitude and coping categories and outlining the second patient's coping process

1) After careful categorization of the attitude and coping categories separately, we associated [category of attitude] and 〈category of coping〉 to explain the point-of- view and illustrated the relevance in diagrams. Point-of-view about process analysis is to answer the question "How does the second patient think/feel and cope with multiple people being diagnosed with breast cancer in her consanguineous family? How can we change the second patient's thinking/feeling and coping in time axis?"

2) We identified some relevance of categories in diagrams, which had larger meanings and explained certain process. We extracted and named the meanings as core categories. Core categories are shown in italics and underlined, for example, *I.****, *II.****.

3) We then constructed story lines by expressing core categories and diagrams, using [category of attitude] and 〈category of coping〉.

4) We then reassessed the word-for-word records to check whether all participants' experiences can be explained by core categories and the diagram. If we could not, we discarded the diagram and repeated steps (1) to (3) until a completed diagram was obtained.

4. Back translation from Japanese categories to English categories

The data gathering and analysis for this study were conducted in Japanese, the researchers' mother tongue, to ensure the meanings and essence of the participants' responses were properly understood. However, the results will be published in English so they can be shared internationally. We therefore performed a back translation following the steps listed below to ensure the categories were accurately expressed in English. The back translation was applied to the categories and core categories. In addition, back translation was applied to the discussion of the characteristics of the coping processes of the second patients among blood relatives in the Discussion section. The back translation was performed by the academic translation company Ulatus Worldwide (Crimson Interactive Pvt. Ltd).

The back translation process used the following steps:

1) The researchers translated the core categories, categories of attitude, and categories of coping from Japanese into English, and these were checked by native English speakers.

2) A professional translator then translated them from English into Japanese.

3) A different professional translator compared the original Japanese categories and the back-translated Japanese categories, and corrected the English categories accordingly.

4) The researchers calculated the concordance rate between the original Japanese categories and the back-translated Japanese categories.

Ⅴ. Validation of analysis

An expert on qualitative and inductive research supervised the entire process.

Ⅵ. Ethical considerations

This study was performed in accordance with The Declaration of Helsinki.

We explained the study goals and obtained written and oral consent from all participants. After explaining the purpose and methods of the study, we informed participants that they were free to join or not and that refusal conferred no disadvantage. Also, we stressed that participants were not compelled to discuss anything they were not comfortable revealing. We assessed participants' physical and psychological conditions between and after interviews and stopped interviews for nursing care if patients appeared stressed or requested a rest. The study proposal was approved by the Ethics Committee of the Department of Nursing, Graduate School of Health Sciences, Okayama University (No.

2016 March 23, D15-05), and Yodogawa Christian Hospital (2016 August 30, no individual approval number).

Results

Ⅰ. Overview of participants

Sixteen breast cancer patients at two hospitals in Japan participated in this study (average age 55.2 ± 10.8 years), one of which had cancer in both breasts. Eleven had received total mastectomy and five partial mastectomy. Three patients were in Stage 0, five in Stage Ⅰ, seven in stage Ⅱ, and two in stage Ⅲ (including the one bilateral patient).

The proband is the second patient's mother in eight cases, the second patient's older sister in five cases, and the second patient's younger sister. The proband is alive in 10 cases and is dead in six cases. (Table 1).

The hospitals were breast cancer specialty hospitals located in a large city in west Japan; one was a general hospital, the other a clinic. They have no genetic counseling, and the patients who wanted to receive genetic testing were referred to other medical facilities. At the general hospital, three certified oncology nurse specialists and one certified nurse for breast cancer provides specialist care. At the clinic, one highly specialized nurses with more than 10 years of experience of breast cancer nursing provides specialist care.

Table 1 Overview of participants

Case	age	operative method	endocrine therapy	simultaneity/ metachronous breast cancer	Stage	proband			alive persons into first-degree affinity person
						relationship	alive/ dead	period from proband's diagnosis to now (year)	
A	Early 60s	left: Bt + AX right: Bt + SLNB	○	simultaneity and both sides breast cancer	left: Ⅱ right: 0	mother	alive	20	mother, small sister, first daughter
B	Late 40s	Bp + SLNB	○	none	Ⅰ	mother	alive	15	father, mother, old sister
C	Early 60	Bt + SLNB	○	none	Ⅰ	old sister	dead	7	mother, small brother, first daughter, second daughter, first son
D	Late 40s	Bp + SLNB		none	0	old sister	alive	10	old sister, four people of old brother, first daughter
E	Late 60s	Bt + AX		none	Ⅲ	old sister	dead	7	first daughter, second daughter
F	Early 40s	Bp + SLNB	○	none	Ⅱ	mother	dead	7	father, small sister
G	Early 40s	Bp + AX	○	none	Ⅱ	mother	alive	4	father, mother, old brother, first son
H	Early 50s	Bt + SLNB	○	none	Ⅱ	mother	alive	8	mother, small sister
I	Late 60s	Bt + SLNB	○	none	Ⅱ	mother	dead	45	old sister, first son
J	Late 60s	Bt + AX		none	Ⅲ	old sister	alive	5	2 people of old sister, old brother
K	Early 50s	Bt + SLNB	○	none	Ⅰ	small sister	alive	4	father, mother, small sister, first son
L	Early 50s	Bt + SLNB	○	none	Ⅱ	mother	dead	7	first daughter, second daughter
M	Early 70s	Bp + SLNB		none	Ⅰ	small sister	alive	1	small sister, first son, first daughter
N	Early 40s	Bt + SLNB	○	none	Ⅰ	small sister	alive	5	father, mother, small sister
O	Late 60s	Bt + SLNB		none	0	old sister	alive	2	2 persons of old sister, 2 persons of old brother
P	Late 40s	Bt + AX		none	Ⅱ	mother	dead	9	father, small sister, small brother

note: Bt; whole breast, Bp; part of breast, Ax; axillary lymph nodes, SLNB; Sentinel lymph node biopsy

Ⅱ. Overview of analysis

Based on the narratives of sixteen participants, nine categories of second patients' attitude for people within blood relatives who were diagnosed with breast cancer as well as 12 categories of their coping were extracted. Then, when these attitude and coping categories were integrated, five core categories indicating the second patients' coping process against familial breast cancer were obtained.

By back translation, the concordance rate between the original and back-translated Japanese categories was 78% for the nine attitude categories; of these, four showed complete concordance, two showed concordance but needed modification for more sophisticated expression, and three needed modification because of a partial mismatch. Similarly, the concordance rate for the 12 coping categories was 83%; of these, four showed complete concordance, six showed concordance but needed modification for more sophisticated expression, and two required modification because of partial mismatch. The concordance rate for the five core categories was 60%; three showed complete concordance, none needed modification for more sophisticated expression, and two required modification because of partial mismatch.

Ⅲ. Categories of second patients' attitude for multiple people within blood relatives being diagnosed with breast cancer

Attitude of breast cancer by the second patient was summarized into nine categories and 22 sub-categories (Table 2). The nine categories are described below.

1. [1. Encountering proband's breast cancer and warning about own breast cancer risk]

   In many cases, second patients reported touching the lump and seeing the surgical wound after the proband's mastectomy. The second patient reported thinking that they may also soon develop breast cancer and regarded the proband's cancer as a warning.

2. [2. Assume no relationship between proband's breast cancer and personal risk]

   In some cases, the second patient thought that the proband's cancer was unrelated to her risk and that she would not develop breast cancer.

3. [3. Proband's breast cancer enters own subconscious and raises instinctive suspicion over small breast abnormalities]

   Some second patients forgot about the proband's caution and did not regularly think about breast cancer in daily life prior to diagnosis. However, noticing any small breast abnormality brought back memories of touching or seeing the proband's breast cancer, and made these women realize that they may also develop breast cancer.

4. [4. Realizes that heredity influences breast cancer onset]

   When some second patients were diagnosed with breast cancer, they believed that heredity influenced their breast cancer development because they and their proband share the same DNA.

5. [5. Prognosis prediction and comparison of breast cancer based on the proband's illness]

   Many second patients believe that they will have the same experience as the proband due to shared susceptibility. If the proband died, the second patient fears her own death, or if proband is alive, she believes she will survive.

6. [6. Proband rescued me and she is irreplaceable]

   Many second patients appreciate the proband because they were encouraged to seek breast cancer treatment early by the proband. Thus, the proband's advice is supportive and effective.

7. [7. Worries about relatives who are at high risk of breast cancer]

   The second patient now knows that breast cancer risk is enhanced in close relatives (daughters, sisters, and nieces), and worries that they will also develop breast cancer.

8. [8. Deny uniqueness of the family with two members who are breast cancer patients]

   Although the second patient knows her own family may have familial breast cancer, she still thinks her family tree is not abnormal as there are a lot of patients in the world.

9. [9. Provide enlightenment about breast cancer beyond own family]

   Many second patients seek to enlighten not only close relatives but also acquaintances about breast cancer.

Ⅳ. Categories of second patients' coping with multiple people within blood relatives being diagnosed with breast cancer

Second patient's strategies for coping with breast cancer was gathered into 12 categories and 19 sub-categories (Table 3).

1. 〈A. Memory of proband's breast cancer as a shock〉

   Second patients often coped by remembering the proband's illness, which became a cautionary story.

2. 〈B. Expect to develop breast cancer because of proband〉

   Second patients expected to develop breast cancer based on the proband's breast cancer.

3. 〈C. Effort for early detection of breast cancer〉

   Many second patients coped by employing preventive

Table 2　Second patients' attitudes of breast cancer

[Category]		
	Sub-category	case
[1. Encountering proband's breast cancer serves and warning about own breast cancer risk]		
1	I cannot forget the feeling of the proband's breast cancer lump when I touched it at the first time.	C, J
2	I was shocked when I saw the proband's surgical wound and chest without mammary tissue.	D
3	Because breast cancer might be genetic and I have proband in my family, I am determined that I will now have breast cancer.	G, K, O
[2. Assume no relationship between proband's breast cancer and personal risk]		
4	Although I understand there is proband in my family, I believe I will not have breast cancer because my family does not have hereditary cancer.	A, E, J
5	There is no relationship between me and breast cancer even if my relative has breast cancer.	A, N
[3. Proband's breast cancer enters own subconscious and raises instinctive suspicion over small breast abnormalities]		
6	I realized I had breast cancer intuitively, when I noticed small abnormal changes in my breast.	A, C, N, P
[4. Realizes that heredity influences breast cancer onset]		
7	Proband thinks that I inherited breast cancer from her and feels guilty for me.	D, F, G
8	The reason for my breast cancer is heredity.	B, I
9	There are two types: heredity test is beneficial for coping against breast cancer; heredity test is not beneficial and brings fear.	A, N
[5. Prognosis prediction and comparison of breast cancer based on the proband's illness]		
10	I am fearful that my destiny will be same as the proband's and my illness process will be like the proband's illness process.	E, I, L, P
11	I think that mine and the proband's disease process are the same because I and the proband share the same gene. But this thought is biased; our processes are different. Therefore, I must correct the bias.	A, N
[6. Proband rescued me, and she is irreplaceable]		
12	I am lucky that I detected breast cancer early due to proband's breast cancer.	D, F, G, O
13	I and proband share bonds because we experience sufferings of breast cancer together.	F, K, M, N, P
14	I have seen how proband faced breast cancer. Therefore, I am not too fearful of breast cancer.	B, C, D, G
15	I understand proband's suffering of breast cancer only after experiencing it myself.	I, N, P
[7. Worries about relatives who are at high risk of breast cancer]		
16	A healthy woman in my family has more serious anxiety than me because she has two patients (proband and me) in family although I have only proband.	E, F, H, P
17	I hope healthy women with hereditary risk in my family will practice preventive behavior.	B, C, D, E, F, G, O, P
18	It is difficult to know how to advise healthy women in my family.	A, B, C, D, H, J,
19	I was helped and I thank the non-relatives's solicitude and kindness.	B, L, P
[8. Deny uniqueness of the family with two members who are breast cancer patients]		
20	There are numerous breast cancer patients in the world. Two patients in my family tree is not a unique thing.	G, I, K, M, P
[9. Provide enlightenment about breast cancer beyond own family]		
21	Reports by mass media are significant for enlightenment on breast cancer and promote other person's empathy against patients.	A, B, D, I, M, N, O, P
22	I hope to enlighten not only my family but also the society because I am the second patient in my family.	G, I, M, N, O, P

behaviors. By expecting own breast cancer, the second patient acted to prevent its occurrence.

4. 〈D. I worry about onset of breast cancer, but I do not take any action〉

Some second patients coped by not behaving (i.e., accepting it as inevitable). The second patient expects to develop breast cancer, and so does not act to prevent it.

5. 〈E. Disconnect from breast cancer〉

Other second patients coped by disconnection. Although the second patient expects to develop breast cancer, she does not have the will to confront it, so she detaches herself from breast cancer, even though she knows there is breast cancer into her family.

6. 〈F. Small abnormalities cause suspicion of breast cancer onset〉

Some second patients cope by utilizing caution. Based on the proband's caution, when the second patient notices even small abnormalities, she believes these are signs of breast cancer.

7. 〈G. Accept breast cancer by heredity as destiny〉

Other second patients cope by acceptance. The second patient accepts that breast cancer is her destiny by belonging to this family as it is hereditary. However, her understanding of heredity as being transmitted to the next generation is different from the precise medical definition of "heredity."

Table 3　Second patient's coping strategies

〈Category〉 Sub-category	Case
〈A. Memory of proband's breast cancer as a shock〉	
a. I remember proband's breast cancer with high shock.	A, C, D
〈B. Expect to develop breast cancer because of proband〉	
b. Breast cancer is familial because of the example set by the proband, and I expect I will develop breast cancer.	H, I, K, O
〈C. Effort for early detection of breast cancer〉	
c. I practice self-exams and receive medical exams because of my relative's breast cancer.	D, K, L
〈D. I worry about onset of breast cancer, but I do not take any action〉	
d. I know breast cancer is hereditary, but a medical exam has been delayed because of my busy daily life.	H, I, K
〈E. Disconnect from breast cancer〉	
e. I have a relative with breast cancer, but I believe I will not develop breast cancer, so I forget about it in daily life.	A, E, F, N
〈F. Small abnormalities cause suspicion of breast cancer onset〉	
f. From memory of the proband's breast cancer, when I notice a small breast abnormality, I undoubtedly believe that it is breast cancer.	A, C, D, G, K, P
〈G. Accept breast cancer by heredity as destiny〉	
g. I realize that my breast cancer is hereditary, so I will inherit the disease.	B, I
〈H. Superimpose own and proband's experience〉	
h. Because of the same blood line, I superimpose my illness process and proband's illness process.	E, P
〈I. Appreciation for the proband and empathizing with them〉	
i. I appreciate proband's comfortable attitude and share experiences of breast cancer with her.	M, N, O
j. Due to warnings from the proband, they found breast cancer early and started treatment early.	D, F, G, O, P
k. I regret not to have noticed proband's suffering.	I, P
〈J. Encouraging prevention according to each healthy relative's condition〉	
l. I gave advice to a young close relative against breast cancer. The reason is that my family tree has a risk of heredity because there are 2 breast cancer patients in my family.	C, D, F, M, O
m. Because I hope my close young relatives have knowledge of and prevent breast cancer, I showed my surgical wound to them.	E, D, P
n. I explained my illness to close relatives. But after that, I checked that they do not fear breast cancer and watch over their lives.	A, C, H, D
o. I approach close relatives to promote the prevention of breast cancer, and I think about how to approach according to each relative's characteristics; for example, their personality and age.	A, B
p. I help close relatives cope with breast cancer and to find it early for oneself because we have two patients in the family.	E, F, H, P
〈K. Hesitate and choose to receive genetic testing〉	
q. I was influenced by the report of an actress with heredity cancer and decided to undergo heredity testing to cope with heredity breast cancer.	N
r. I did not undergo heredity testing because I feared knowing the result of high risk.	A, H
〈L. My persuasive enlightenment as a second patient in my family 〉	
s. My advice is persuasiveness because I am the second patient in my family.	C, F, G, M, N

8. 〈H. Superimpose own and proband's experience〉

Second patients also coped by comparing themselves to the proband. Second patients know about the proband's illness and expect their illness to resemble that of the proband.

9. 〈I. Appreciation for the proband and empathizing with the proband〉

Some second patients coped by appreciating, empathizing, and sharing. Second patients appreciated the proband as she facilitated early detection of breast cancer. The second patient and proband share suffering and empathize with each other. If the proband had died already, the message left tightened the bond.

10. 〈J. Encouraging prevention according to each healthy relative's condition〉

Many second patients coped by protecting blood relatives. There is no uniform method for prevention of breast cancer, so the second patient uses a trial and error approach depending on each blood relatives' personality.

11. 〈K. Hesitate and choose to receive genetic testing〉

Some second patients coped by decision-making. Second

patients recognize that female relatives are also at risk and weigh the merits and demerits of clarifying whether the family harbors a breast cancer risk gene. The second patient often worries and hesitates before deciding.

12. 〈L. My persuasive enlightenment as a second patient in my family〉

Second patients also coped by enlightenment. The second patient spreads her concern from her own family to other people. As the second patient has unique experience, she can be persuasive.

Ⅴ. Synthesis of attitude and coping categories, and outlining the second patients' coping process against familial breast cancer

9 of［category of attitude］and 12 of〈category of coping〉were associated according to the point-of-view about process analysis, the second patients' coping process was illustrated by the diagram（See Fig.1）. This analysis yielded five core

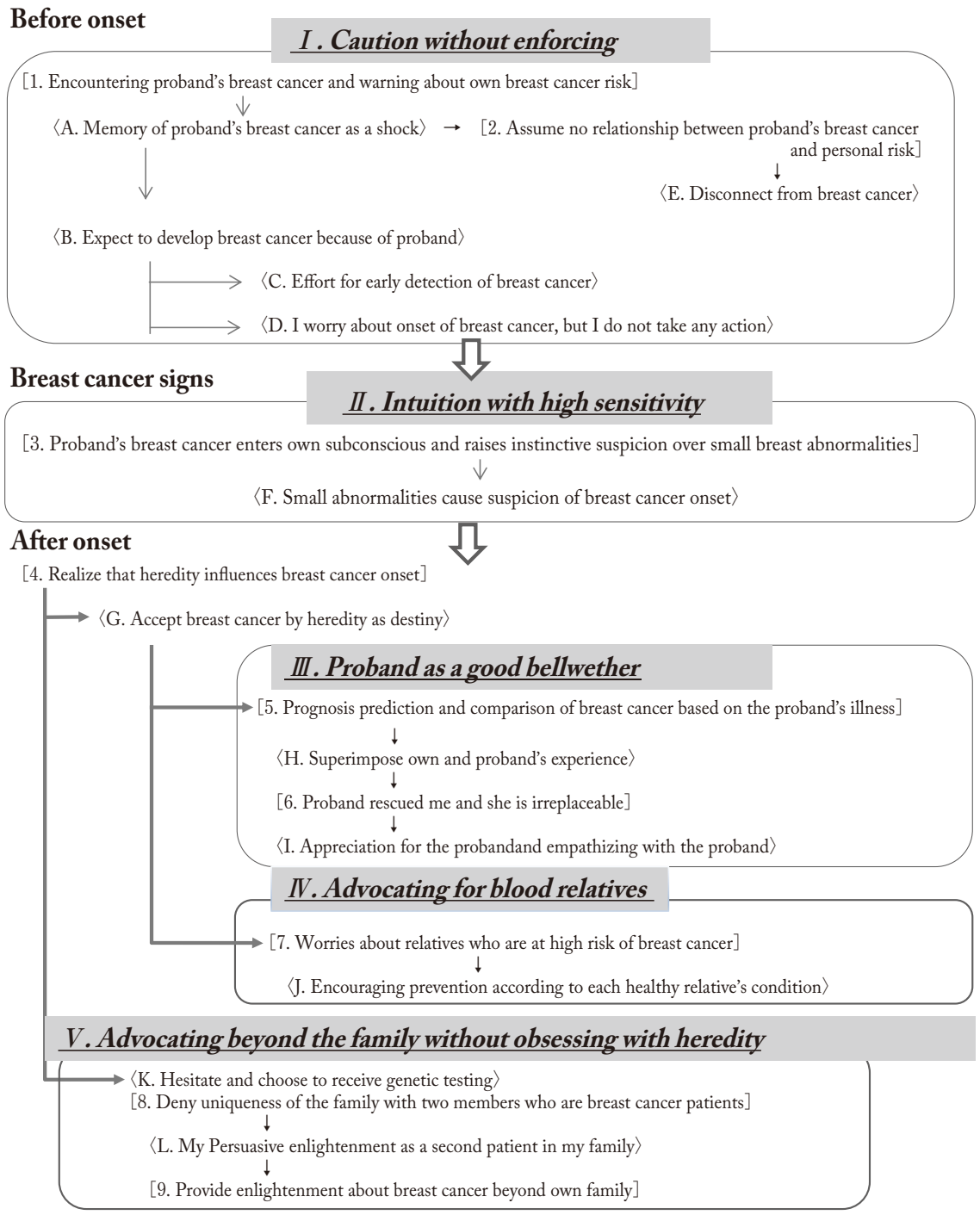

Fig.1　Synthesis of attitude and coping categories, and outlining second patients' coping process against familial breast cancer

categories; Ⅰ. Caution without enforcing, Ⅱ. Intuition with high sensitivity, Ⅲ. Proband as a good bellwether, Ⅳ. Advocating for blood relatives, and Ⅴ. Advocating beyond the family without obsessing with heredity. We show the story lines below.

1. Before onset: *Ⅰ. Caution without enforcing*

The second patient stating [1. Encountering proband's breast cancer and warning about own breast cancer risk] has 〈A. Memorized the proband's breast cancer as a shock〉.

Second patients who have 〈A. Memorized proband's breast cancer as a shock〉, may also [2. Assume no relationship between proband's breast cancer and my risk] and 〈E. Disconnect from breast cancer〉 in daily life.

On the other hand, second patients who 〈B. Expect to develop breast cancer because of proband 〉 were divided into two patterns: 〈C. Effort for early detection of breast cancer〉 and 〈D. I worry about onset of breast cancer, but I do not take any action〉.

2. Appearing at first signs of breast cancer: *Ⅱ. Intuition with high sensitivity*

When the second patient notices signs, [3. Proband's breast cancer enters own subconscious and raises instinctive suspicion over small breast abnormalities], and she 〈F. Small abnormalities cause suspicion of breast cancer onset〉.

3. After onset (1): *Ⅲ. Proband as a good bellwether*

After developing breast cancer, the second patient [4. Realizes that heredity influences breast cancer onset] and 〈G. Accepts breast cancer by heredity as destiny〉. She also thinks that [5. Prognosis prediction and comparison of breast cancer based on the proband's illness], and 〈H. Superimposes own and proband's experience〉, so she expects and copes with difficulties of treatment and symptoms. As the proband provided useful information and understanding, and facilitated early detection, the second patient thinks that the [6. Proband has rescued me, and she is irreplaceable] and she has an 〈I. Appreciation for the proband and empathizes with the proband〉.

4. After onset (2): *Ⅳ. Advocating for blood relatives*

The second patient, who [4. Realizes that heredity influences breast cancer onset] and 〈G. accepts breast cancer by heredity as destiny〉, then [7. Worries about relatives who are at high risk of breast cancer] because risk is heightened by the appearance of two patients in one family. She thus tries to prevent breast cancer in her blood relatives by 〈J. Encouraging prevention according to each healthy relative's condition〉.

5. After onset (3): *Ⅴ. Advocating beyond the family without obsessing with heredity*

Second patients who [4. Realize that heredity influences breast cancer onset] waver over whether to have genetic testing 〈K. Hesitate and choose to receive genetic testing〉, because she worries that knowing will negatively impact younger blood relatives. Although she [4. Realizes that heredity influences breast cancer onset], she [8. Deny uniqueness of the family with two members who are breast cancer patients] and disregards or ignores whether or not her family has hereditary breast cancer.

On the other hand, she continues 〈L. My Persuasive enlightenment as a second patient in my family〉, and her actions are spread [9. Provide enlightenment about breast cancer beyond own family], and she becomes an advocate to all women.

Discussion

Coping process against familial breast cancer by a second patient within blood relatives is explained by five core categories: *Ⅰ. Caution without enforcing, Ⅱ. Intuition with high sensitivity, Ⅲ. Proband as a good bellwether, Ⅳ. Advocating for blood relatives, and Ⅴ. Advocating beyond the family without obsessing with heredity*. In this section, we discuss 1) characteristic experiences of the second patient (See Fig.2), 2) nursing strategies to enhance the coping ability in the consanguineous family through the second patient's support, and 3) limitations of the study.

Ⅰ. Characteristic experiences of the second patients

1. Forgetting breast cancer in health, working intuition for coping at contingency

The core category before onset was *Ⅰ. Caution without enforcing*. In other words, although the second patient accepted the proband's breast cancer with impact and recognized this event as an indication for "caution," only some actively coped through behavior promoting early detection, while others denied the relation between the proband cancer and their risk, or regarded cancer/health as inevitable regardless of actions. On the other hand, when the second patient saw potential signs of breast cancer, it retrieved memories of touching or seeing the proband's cancer. The second patient thus understands having cancer by intuition, and seeks diagnosis as soon as possible (*Ⅱ. Intuition with high sensitivity*).

Why do some second patients not make the connection between caution and preventive action? Japan has been

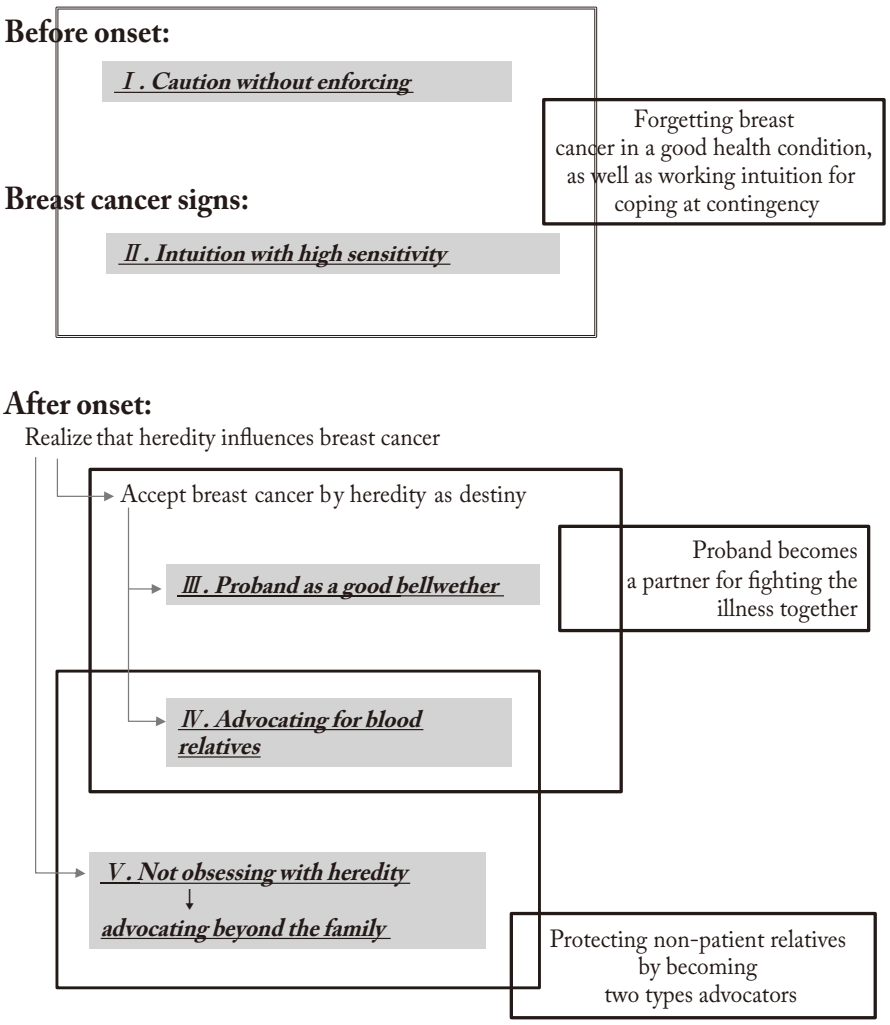

Fig.2 Characteristics of Second Patients' coping process against familial breast cancer

experiencing several megathrust earthquakes since ancient times. Although citizens understand that mega-earthquake will occur, we do not think about them in daily life. But if one does occur, we are able to cope as individuals and institutions (local and central governments).

Non-patients in families with at least two breast cancer patients also understand that they are at high risk, and can cope with a personal diagnosis. However, continuing to practice preventive behavior forces the second patient to confront the reality that they are in a high-risk family as well as the other negative aspects of cancer. This situation may cause suffering in non-patients because like an earthquake, breast cancer may or may not occur, and if it occurs, it may be next year or 30 years in the future. In addition, non-patients have expectations or plans such as falling in love, marriage, and having children. Despite the real possibility of breast cancer, making future decisions on the assumption of developing breast cancer will interfere with having a fulfilling life.

Neise et al., (2001) found that increased risk perception had negative effects on participation in recommended breast cancer screening, and our study provides a plausible explanation. Thus, appropriate care for non-patients should not stress excessive caution and stoke anxiety, but rather should increase sensitivity to enhance natural suspicion and the ability to cope with breast cancer as soon as abnormalities are noticed.

2. Proband becomes a partner for fighting the illness together

After disease onset, two of three core categories are *Ⅲ. Proband as a good bellwether* and *Ⅳ. Advocating for blood relatives*. Based on the example of the proband, the second patient may achieve early detection and receive useful information from the proband. Further, the second patient and proband may provide mutual support to each other and may together try to protect the other healthy females within blood relatives from breast cancer. Therefore, the proband is a pioneer and bellwether for the

second patient.

A diagnosis of idiopathic breast cancer has a strong impact, as the patient will experience anxiety and uncertainly compounded by lack of knowledge about breast cancer (“the previously invisible”) (Mehrabi et al., 2016). Indeed, the idiopathic breast cancer patient is usually the first patient in her family, and she does not have a role model. Therefore, she feels fearful and helpless stepping into an unknown world. On the other hand, the second patient has such a role model in the proband. The proband provides an example of the disease process and the associated suffering and worry that must be overcome. If the proband survives without recurrence, the second patient will tend to think positively regarding their own chances of survival. By adopting the proband as bellwether, the second patient is receiving guidance and direction.

Second, our data showed that the second patient superimposes their own illness on that of the proband's. The proband's illness influences attitude by the second patient. Familial and hereditary breast cancer are characterized by earlier onset and high aggression, so the second patient sees the suffering and possible death of the proband, which may be an additional source of trauma. Research on healthy women with a family history of breast cancer or having high risk of heredity has revealed maternal absence distress (Johnson & Pascal, 2016) and grief over actual and potential familial loss (Underhill el al., 2012) as major traumas.

On the contrary, our results did not show suffering and trauma from proband's dying and death in spite of 6 of 16 participants experiencing the proband's death and some of these participants reporting that “maybe I will die.” The reasons provided by our participants were “proband was too late, but I can find it early,” “when (the proband) died, she did not show her suffering to the second patient intentionally,” or “I do not remember proband's death, because my concern was low before my breast cancer.” In other words, some of our participants were not aware of the proband's true suffering. Therefore, although second patients probably suffered because of the proband's death before completing the process of grief, but our study cannot explain them and we cannot arrive at a theoretical saturation against the point. Although the proband's illness and death may be traumatic to the second patient, she may also draw strength by regarding the proband as a bellwether and pioneer. Moreover, the bellwether's coping strategies and knowledge can accumulate among family members, and multiple patients within the family can cooperate. To become good bellwethers, the first and second patient must have some positive experiences. Therefore, medical staff should be aware of non-patients within the family and provide care that minimizes the trauma to these healthy relatives.

3. Protecting non-patient relatives by becoming two types of advocators

After disease onset, many second patients started *Ⅳ. Advocating for blood relatives* and (or) *Ⅴ. Advocating beyond the family without obsessing with heredity*.

The first form of advocacy involves accepting breast cancer as destiny by heredity. In this case, the patient copes by attempting to protect non-patient relatives (who are at statistically higher risk than the second patient was before diagnosis) using a flexible strategy for promoting prevention according to each relative's age and personality. The coping strategy aims to decrease non-patient relatives' fear against breast cancer and to prevent negative influence of the disease on life events, such falling in love, marriage, and raising children.

This strategy is similar to *Ⅰ. Caution without enforcement* and *Ⅱ. Intuition with high sensitivity*, as explained by the earthquake analogy (Discussion Section 1). Before onset, the second patient accepted the proband's cancer with impact, but did not continue to think often about breast cancer. At the first sign of breast cancer, however, het intuition compels here to seek treatment as soon as possible. Both protecting non-patients and coping with the proband's cancer can minimize negative influences on non-patient relatives and help them prepare for a crisis. This attitude of forgetting breast cancer and enjoying life in health but “preparing for war” if cancer appears may be handed down from the proband and second patient to subsequent generations to facilitate coping with crisis while still allowing for a meaningful life.

The second patient was often hesitant to have a genetic test, and denied the singularity of the family despite two breast cancer patients. To cope, the second patient would become an advocate beyond her own family to enlighten other women about breast cancer. A positive genetic test means that the family must confront the fact that it harbors a breast cancer risk gene. Denying the influence of heredity and the uniqueness of the family as high risk are ways of avoiding and overcoming by generalization. By informing other women beyond the immediate family, the second patient can still enlighten and protect non-patient relatives without perceiving them as high risk or passing on this fear of risk to these relatives.

If heredity is clarified, non-patient relatives may let the fear of breast cancer interfere with their life aims. Nonetheless, they must be prepared for crisis because breast cancer risk is high. To resolve this conflict, the second patient may avoid clarifying

whether the family harbors a breast cancer risk gene and attempt to enlighten all non-patients regardless of blood relation. This is a positive, constructive, and realistic coping strategy for a high-risk family and is in accord with a previous study on the decision-making of healthy women testing positive for a BRCA mutation. They want to be logical and reduce their cancer risk, but emotions often complicate their decision-making due to the emotional desires of motherhood (Dean, 2017). Clarifying heredity risk will force her to incorporate the possibility of breast cancer into her life plans. Therefore, certainty over gene risk may influence not only the woman but also her husband, parents, and children, as if she develops cancer and dies during child rearing her family will suffer (Kondo & Sato, 2011; Kondo & Sato, 2007). If she decides not to get married and not to bear any children to avoid the sufferings of her children and husband due to her breast cancer and possible death, there is an increased possibility of the breakdown of the consanguineous family and cutting off of the family line.

In Japan, genetic testing is not as popular as in the USA (Sugano et al., 2008), likely because patients think this knowledge may have negative impacts on healthy relatives. Other possible reasons are that 1) breast cancer risk is also influenced by environmental and lifestyle factors such as diet, breast-feeding, and childbirth, 2) Japanese women may prefer the uncertainty to facing the reality of increased breast cancer risk, 3) genetic testing does not completely exclude the possibility of familial breast cancer because the family may harbor genetic factors not yet associated with breast cancer risk, and 4) the scarcity of testing sites and genetic counselors in Japan.

Given the coping strategies demonstrated by second patients who do not wish certainty regarding genetic risk (Discussion Section 1), we do not support medical staff pressuring patients to submit to genetic testing. Rather, medical staff should support the patient's decision and start considering the needs of the entire family (including healthy female relatives) when the possibility of familial breast cancer is increasing, whether or not they seek genetic testing. Support after obtaining positive results is outside the scope of this study but warrants additional investigation.

As mentioned, the second patient often attempts to minimize the negative impact on non-patient relatives by either advocating specifically (encouraging regular examination, etc.) or to all women (beyond the family). Medical staff should support these efforts and also support non-patient relatives directly and through the second patient whether or not the second patient is willing to undergo genetic testing for familial/hereditary breast cancer.

Ⅱ. Nursing strategies to enhance adaptation in a consanguineous family and to prevent cutting off of the family line through support of the second patient

The second patients' coping strategies should be spread among the entire consanguineous family to reduce the anxiety of non-patients and minimize negative impacts on life decisions while still preparing against crises (breast cancer). In this way, coping strategies of the proband (bellwether) and second patient are accumulated among family members. For these coping strategies to work for the family, it is critical to support the second patient, as she is the initial indicator of elevated genetic risk. Therefore, suitable support for second patients is support for the entire family at increased risk of familial breast cancer. We list specific recommendations for improving nursing as follows (See Table 4).

Ⅲ. Limitations and future research projects

In this study, we did not select second patients with recurrence, metastasis, or terminal breast cancer to eliminate the influences of these burdens and focus on attitude and coping strategies. The second patients also had mixed experiences regarding the proband, who passed away in six cases. However, none of the 16 participants experienced severe trauma from the proband's death. Third, only one second patient had bilateral breast cancer. Four, we did not focus on breast cancer patients who had received clarification by genetic testing; rather, the focus was on patients and families with possible increased risk of familial breast cancer. Five, the participants of the study were Japanese outpatients in two Japanese hospitals.

Thus, although our result can explain the coping processes of second patients who were in good condition and did not feel trauma as a result of the first family member's death, they cannot explain these strategies in families with clarity regarding hereditary breast cancer, a high probability of hereditary breast cancer, early onset cancer, or frequent metachronous breast cancer. Conversely, our results cannot sufficiently explain patients who determine hereditary breast cancer by genetic test, and family tree contained young adult patients and bilateral breast cancer patients and multi-organ multiple cancer. In addition, when researchers from other countries apply our results, they should consider how to take account of different nationalities, races, medical systems, and cultural backgrounds and should decide accordingly their applicability.

Further research must address the following issues. 1) We must examine how these strategies are disseminated among

Table 4　Nursing strategies to enhance adaptation as consanguineous family

1）Provide good palliative care for proband and second patient, because their sufferings will increase non-patient relatives's fear againt cancer.
- Support proband's and second patinet's decision making with no regret.
- Gather information on the mental condition of non-patient relatives. If proband or second patient dies, provide them with grief care.
- If proband or second patient has young or have children, get to ask oncology clinical nursing specialists, and to educate general nurses about the suffering of cancer patients with children（Kondo & Sato, 2011）, the suffering of her a cancer patient's husband（Kondo & Soto, 2007）, and grief care for children who have lost their mother（Forrest et al., 2006）

2）Explain the significance of articulating and expressing in words these experiences to allow the non-patinent relatives to inherit the bellwether's and second patient's coping strategies.
- Explain non-patient relatives about proband's and second patient's a path to cope with the illness. Through their example, suggest that non-patient relatives should recognize the negative as well as the hopeful aspects of their illness.
- Support communicating the proband's and second patient's coping strategy, because in certain cases, the proband and second patient cannot precisely define their coping strategy or gauge its effectiveness.
- Explain the importance of passing on these coping strategies to healthy relatives and the significance of accumulating these coping strategies within the consanguineouse family for future generations.

3）Support second patients for becoing two typese advocators.
- If the second patient cannot decide whether they should undergo genetic testing, this should be taken as aother means to protect non-patient relatives from stress and anxiety.
- If the second patient wants to enlighten women beyond her consanguineous family, she should be provided the necessary medical information.
- Gather information about awareness activity for non-patient relatives, and consult the second patient how to communicate and conduct awareness activity without fear and stress.

4）Start actively supporting non-patient relatives regardless of whether the second patient selects genetic testing.
- Explain to general nurses the significance of screening high-risk families against familial breast cancer.
- Explain to them the importance of constructing a family line. However, also explain the importance of protecting the patients privacy and stress that patients may not want to answer certain questions or share some information with others in the family.
- Explain to general nurses that familial breast cancer should be suspected when a second patient in the consanguineous family is diagnosed with breast cancer. Patients as well as non-patient relatives should be supported.
- Explain that bilateral cancer or both breast cancer is a sign of familial breast cancer; therefore, the nurse should gather information about non-patient relatives. When gathering information, the nurse should listen with empathy, and pay attention to his/her own attitude so the proband's fear does not increase.

5）Minimize negative influence in the life events and important decision-making situations of non-patient relatives.
- Provide information and care without causing anxiety in non-patients.
- Gather information from the second patient about whether specific information may negatively impact the lives and decisions of non-patient relatives regarding marriage and family.
- Support the second patient in her efforts to reduce these negative impacts on her female relatives.
- If the second patient worries that non-patients might not take preventive actions against breast cancer, explain the difficulty of maintaining caution in daily life and the significance of working intuition when small breast abnormalities are noticed. In addition, explain to second patients the significance of narrowing down and proving non-patients with the essential information to promote working intuition as a measure to seek timely treatment.
- Our methods of support to non-patients should consider age and personality.

6）Support the decision of the second patient with respect to genetic testing.
- Consider whether genetic testing is in the family's best interests and provide advice according to the wishes of the second patient.
- If the second patient cannot decide, advise that proband or second patient should discuss this issue with the consanguineous family considering both positive and negative impacts on specific family members. If a family member wants to talk to medical staff, listen and provide counseling to deepen and organize her thinking.
- Perform careful assessment of family history, current medical history of the proband and second patient（for example, bilateral breast cancer or other type of cancer）, the proband's prognosis, malignance level, age of onset, etc. This allows prediction of familial breast cancer without genetic testing.
- This study alone is insufficient to provide decision-making support for genetic testing, so care after a positive result should consider the best research evidence（Dean & Rauscher, 2017; Scherr et al., 2016; Maheu, 2009; Cabrera et al., 2010）and involve trained genetic counselors.

family members. While their statements suggested that these coping strategies will be inherited from former patient to subsequent patient, we did not directly examine inherited coping strategies among healthy relatives or subsequent (third) patients. We will conducted additional interviews of the proband as well as third and later patients to clarify how these strategies are passed on to the next generation. 2) We must also describe unique coping strategies of third and later patients in families as these patients are at even greater risk. 3) We need to examine how the proband's death impacted the second and subsequent patients as continued grief counseling may be required. Indeed, the second or third patients may have poor prognosis. 4) We need to study ways to support families with positive results. 5) Finally, we need to conduct an interventional study to confirm whether the nursing methods suggested by these results can actually improve coping strategies among family members with possible familial breast cancer.

Conclusion

The central goal of the project is to provide coping strategies for a consanguineous family to cope with familial breast cancer so that they can compensate for the disadvantages associated with familial breast cancer and can develop the discontinuation of the family line. Although our target for support is a consanguineous family, as a first step, we focused on second patients within blood relatives. Because the reasons are the emergence of these cases increases the possibility of the disease being familial breast cancer, and the second patient within blood relatives to be diagnosed with breast cancer is thus the key person from whom the consanguineous family can assimilate coping strategies against family breast cancer.

Coping process against increased risk of familial breast cancer by second patients within blood relatives are explained as five core categories; Caution without enforcement, (before onset), Intuition with high sensitivity (at signs of breast cancer), Proband as a good bellwether, Advocating for blood relatives, and, Advocating beyond the family without obsessing with heredity (after onset). The second patients characteristically protect non-patients by cooperating with the proband and by becoming two types of advocators. Based on these results, we suggest that consanguineous families may benefit by accumulating coping strategies that prepare for crisis while minimizing non-patient's fear and negative impacts on future life decisions (such as marriage and having children).

Research on support for families with heritable breast cancer is just beginning. Focusing on the second patient, whose breast cancer increases the possibility of familial breast cancer, may reveal novel strategies for improved treatment of both patients and healthy high-risk family members.

CONFLICTS of INTEREST

The authors declare no conflicts of interest associated with this manuscript.

AUTHOR CONTRIBUTION

All authors approved the final version of the manuscript and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

要　旨

目的：家系で 2 人目の乳がん患者は，適応力を高め家系の存続を図る中核となる。本研究では，家系で 2 人目の患者の家族性乳がんへの対処過程を明らかにし家系を守る支援を検討する。

方法：対象者16名に半構造化面接を行い，質的帰納的に分析した。

結果：発端者の闘病を目の当たりにした 2 人目患者は，乳がん発症前には強制力を伴わない警告と捉え深刻さを和らげる一方，発症時には感度の高い直観が働き迅速な受診行動をとった。発症後は，発端者ががん適応の良き導き手となると共に，発症リスクの高い未発症者を守る血族アドボケーターとなり，さらには遺伝性にとらわれず家系を越えた啓発者となった。

考察：家族性乳がんの家系を守る支援は，未発症者の危機への備えを怠ることなく平時の不安を和らげ，女性のライフイベントへの悪影響を最小限にし，発端者と 2 人目発症者が獲得した対処方法を家系の知恵として蓄積，共有することが示唆された。

Abstract

Purpose: When the second patient is diagnosed with breast cancer, there is a high possibility that the disease is familial, and her ability to cope with the disease is essential for the family to adapt to the presence of familial breast cancer. This study aimed to understand the coping process of the second patient within blood relatives who has been diagnosed with familial breast cancer to identify effective nursing strategies.

Method: Data were gathered using semi-structured interviews based on an interview guide and analyzed using qualitative and inductive research methods.

Result: Sixteen patients were enrolled (age range: 40-72 years). Core categories were Caution without enforcement (before onset), Intuition with high sensitivity (at first breast cancer signs), Proband as a good bellwether, Advocating for blood relatives, and Advocating beyond the family without obsessing with heredity (all after diagnosis).

Discussion: Nursing strategies to enhance adaptation to familial breast cancer in a consanguineous family are 1) to reduce the anxiety of non-patients and to minimize the negative impacts on life decisions while still preparing against crises (breast cancer) and 2) to accumulate the coping strategies of the bellwethers among the consanguineous family.

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