



The Factors for Success and Lack of Success in the Breast Cancer Patient Care Pathway: A Qualitative Study From the Health Care Staff Perspective

Eija Metsälä¹, Tanja Schroderus-Salo², Kjersti Straume³, Bergliot Strom⁴, Laurent Marmy⁵, Mona Øynes⁴,
 José A. Pires Jorge⁵, Liis Randle⁶, Siret Kivistik⁷

¹Department of Rehabilitation and Examination, Metropolia University of Applied Sciences, Vantaa, Finland

²Department of Radiography and Radiotherapy, Oulu University of Applied Sciences, Oulu, Finland

³Department of Cancer Treatment and Medical Physics, Haukeland University Hospital, Bergen, Norway

⁴Faculty of Health and Social Science, Western Norway University of Applied Sciences, Bergen, Norway

⁵Department of Radiography and Radiotherapy, School of Health Sciences (HESAV), HES-SO University of Applied Sciences and Arts Western Switzerland, Delémont, Switzerland

⁶Department of Haematology and Oncology, Clinic Tartu University Hospital, Tartu, Estonia

⁷Department of Radiography and Biomedical Laboratory Science Tartu Healthcare College, Tartu, Estonia

ABSTRACT

Objective: To produce information about factors related to successful and unsuccessful breast cancer care pathways from the health care staff perspective.

Materials and Methods: An electronic qualitative survey was used to collect data simultaneously from hospitals located in four different countries, focusing on four professional groups: diagnostic radiographers; radiation therapists; breast cancer nurses; and biomedical laboratory scientists (n = 23). The hospitals participating in the study treat breast cancer patients and research permits were applied from all of them. Data was analysed by deductive thematic analysis.

Results: At the core of a successful breast cancer care pathway is the right content and timely information provided to the patient at the pace the patient is able to adopt. This is especially highlighted at the beginning of the treatment process. In regards to diagnostic services, rigorous execution of mammography, sampling techniques and analyses were seen as important. Staff also valued the importance of aftercare and follow-up, and highlighted the fact that the patient should be given a chance to keep in close contact with care and treatment staff, even after their active treatment process has finished.

Conclusion: Health care staff recognized the same success factors for optimal breast cancer care and treatment pathways as patients reported in previous studies, yet more emphasis was put on patient characteristics and the technical performance features of the process. Both patient and staff viewpoints should be taken into account in planning breast cancer care pathways.

Keywords: Breast cancer, care pathway, staff viewpoint, success factors

Cite this article as: Metsälä E, Schroderus-Salo T, Straume K, Strom B, Marmy L, Øynes M, Jorge JAP, Randle L, Kivistik S. The Factors for Success and Lack of Success in the Breast Cancer Patient Care Pathway: A Qualitative Study From the Health Care Staff Perspective. Eur J Breast Health 2022; 18(3): 222-228

Key Points

- Providing the right content and timely information to the patient at the pace the patient is able to adopt it is very important factor for breast cancer care and treatment success.
- Ensuring the availability of staff for counselling at the breast cancer care follow-up stage should be emphasised in breast clinics.
- Both patient and staff viewpoints should be taken into account in planning breast cancer care pathways.

Introduction

Care pathways are used to systematically plan and follow up patient-focused care programmes (1, 2). The aim of the care pathway is to enhance the quality of care by improving risk-adjusted patient outcomes, promoting patient safety, increasing patient satisfaction, and optimizing the use of resources (3). Hansen et al. (4) suggested the concept of the patient-centred pathway to emphasize the importance of patient perspective in service planning (4).

Common breast cancer treatment involves surgery, chemotherapy, radiotherapy, hormonal and biological therapies. The breast cancer patient pathway from the patient perspective can be divided into three stages: diagnosis, treatment, and the follow-up stage (5, 6). Patient pathways are unique and dynamic, following the individual features of each patient's health status, genetics, experiences, as well as the context. This requires all involved health care professionals should have knowledge about the entire care and treatment process (4, 7).

The planning and execution of breast cancer care and various treatments should be conducted by a multidisciplinary team (8). The European Society of Breast Cancer Specialists, EUSOMA (9), reminds health care organizations to pay close attention to multidisciplinary and patient-centred breast cancer pathways, ranging from the diagnostic stage to the follow-up stage (10). Cancer detection, diagnosis and care coordination comprise appropriate care that is timely and provided by an interprofessional team including professionals from many fields (11). A multi-professional mode of working results in better breast cancer treatment in terms of clinical and process outcomes in many aspects, including patient participation in decision making, as well as cancer research (12).

Hansen et al. (4) found that at the beginning of their care pathway, patients are focused on the biological goals and conventional treatment. By biological goals, Berntsen et al. (13) mean removing the cause of the disease and relieving symptoms through biological manipulation. In contrast, Waelli et al. (14) reported that breast cancer patients with chronic conditions rated non-clinical demands to be almost as important as clinical demands. They identified five types of non-clinical patient demands in the delivery of their health care services: demands related to daily life; alternative medicine; the structure of the treatment pathway; administrative and logistic assistance; and demands related to new technologies (14).

Some studies show that patients report that health care staff do not have the diversity of competencies to optimally meet patient needs (6, 15-17). There are deficiencies in empathy and communication skills, as well as in giving adequate information throughout their care pathway. Unmet needs in the patient care pathway have the potential to affect their survival and satisfaction levels (6, 15). According to Sandager et al. (16, 17), patients and their next of kin were not satisfied with the level of their involvement in treatment decisions and the amount of information received. They also reported not being informed about the persons responsible for their care. Studies have demonstrated that women with breast cancer have too little relevant information (15, 18, 19). There is a lack of psychosocial support, individualized care and choice of treatment, as well as a lack of follow-up during their treatment process (15, 18, 19). In order to improve breast cancer patients' services and care, it is necessary to have the patient and staff viewpoints regarding the process (15, 20). This study is part of a larger

project where the breast cancer patient care pathway is inspected from both of these viewpoints. In this article, the staff viewpoint is focused on.

The objective of this research was to produce information about the factors contributing to the success or lack of success in a breast cancer care pathway at the treatment phase, from the health care staff perspective. In this study, our subjects comprise staff educated at universities of applied sciences: diagnostic radiographers; radiation therapists; breast cancer nurses; and biomedical laboratory scientists. The information obtained in this study will be used in planning a web-based education platform about the topic for these groups of health care professionals. The research questions were:

1. What factors are associated with successful breast cancer care pathways at the treatment stage?
2. What factors are associated with unsuccessful breast cancer care pathways at the treatment stage?

Materials and Methods

Design, Sampling and Data Collection

The methodological approach chosen was phenomenography where the emphasis is on how people construct their views about the world. The analysis is whole group oriented since all data was analysed together with the aim of identifying possible conceptions of experience related to the phenomenon under investigation (21, 22). The data collection instrument was constructed based on the principles of critical incident methodology with the aim of identifying the factors contributing to successful and unsuccessful individual care pathways during cancer treatment and procedures, from the staff viewpoint (23).

Data was collected simultaneously at four hospitals treating breast cancer patients in four different countries, as follows: Tartu University Hospital in Estonia; Oulu University Hospital in Finland Cantonal Hospital of Freiburg in Switzerland; and Haukeland University Hospital in Norway. The target groups included diagnostic radiographers, radiation therapists, breast cancer nurses and biomedical laboratory scientists.

The convenience sampling method was used. In Estonia and Finland, the research contact person invited to participate in the study by sending an email to relevant organizations. In Norway, the contact person at each department provided a link to the invitation on the department web page. In Switzerland, there were several contact people at the hospital, who sent the invitation to their staff by email. It included the participant information letter comprising the data privacy notice and the link to the questionnaire. Criteria for the respondents were: being able to read and write in English (except in Switzerland); having at least three years of work experience with oncology patients; and working with breast cancer patients at the time of the survey. The aim was to have two or three respondents from each professional group per country. The survey was planned to be conducted from 17.05.21 to 07.06.2021. Due to an insufficient number of responses, reminders were sent midway through September for a two-week extra data collection period. The data collection was completed on 30.09.2021. Responses were obtained from seven diagnostic radiographers, eight radiation therapists, two breast cancer nurses and six biomedical laboratory scientists, comprising a total of 23 respondents.

Data Collection Instrument

Regarding the background factors, there was only one open-ended question about the profession of the respondent. The eight open-ended questions were based on the steps of the breast cancer care pathway as described by the EUSOMA quality indicators of breast cancer care (10, 24), as well as by European research studies (5, 25). In regards to the services in the care pathway, the staff were asked what they considered to be the factors leading to successful and unsuccessful service provision. The questionnaire in English was provided in Estonia, Finland and Norway to avoid bias due to translation. In Switzerland, the questionnaire was provided in French, and translated by the project group members who also translated the responses from French to English.

Pilot Study

Before applying for a research permit, the questionnaire was piloted by seven project group members from each of the countries participating in the study who had not participated in constructing of the data collection instrument but represented each of the target group professions. The data collection instrument was revised according to the comments obtained by piloting, including the addition of a question about the respondent profession and reformulation of some sentences to make them clearer.

Statistical Analysis

Data was analysed by deductive thematic analysis, using as a theoretical frame of analysis the steps of the breast cancer care pathway which also formed the organizing themes (26, 27). Firstly, one researcher became familiar with the data to identify units of analysis, which were then formed into condensed-meaning units. Then, the features of interest in the data were coded across the dataset, collating data relevant to each code. After coding, the codes were abstracted to themes and subthemes. The first author performed the preliminary coding and thematization. The coding consistency and thematization were then checked by two more researchers. No major discrepancies were found.

Ethical Issues

Research permits were obtained from every hospital participating in the study. The need for an ethics board permit was requested from the Norwegian centre for research data as the Western Norway University of Applied Sciences (HVL) was coordinating the data collection of this study. However, the Norwegian centre for research data responded that the ethics board permit was not necessary since no medical or sensitive data was collected. A data privacy notice was provided to the subjects. The only personal data collected from the participants was their professional title. However, it would be impossible to connect the subjects to their responses. The software used for data collection was Cisco AnyConnect Secure Mobility Client governed by the Western Norway University of Applied Sciences (HVL). Only nominated persons from the project group processed and analysed the data stored in the closed cloud drive and thereby protected against third party data access.

Results

Results are presented in two subchapters: a) diagnostic services comprising laboratory and mammography services; and b) treatments and therapies comprising preparation to treatment, breast surgery and reconstruction, radiotherapy, chemotherapy, endocrine and biological therapies and counselling following the treatment.

Factors Contributing to Success or Lack of Success of Diagnostic Services in the care Pathway

In mammography, patient guidance about the procedure and the capability to perform the examination in an optimal manner were seen as the factors important for success. In addition, the ability to support the patient during the procedure was also considered important. However, the pain, anxiety or fear experienced by the patient during the procedure or the inability of staff to conduct the examination in an optimal manner contributed to a suboptimal performance of diagnostic services.

“Patient anxiety about the mammogram result and the procedure.” (Lack of success factor related to patient anxiety and fear).

The factors leading to success or lack of success of diagnostic services in the breast cancer patient care pathway are provided in Table 1.

Most comments obtained from health care staff were about the rigorous performance of sampling techniques and analyses.

“Carry out the analyses of patients conscientiously and following our ethics (quality control, respect of pre-analysis, respect of the deadline of results, professional conscience.” (Success factor related to rigorous execution of sampling techniques and analyses).

Reliable and quick reporting of laboratory results, a short waiting time and pleasant behaviour of laboratory staff were reported as signs of optimal breast cancer pathways by the respondents. On the other hand, the lack of these signs may indicate a suboptimal performance (Table 1).

Factors Leading to Success or Lack of Success of Treatments and Therapies in the care Pathway

Regarding the preparation prior to treatment and giving the patient enough information with the right kind of content was recognized by the respondents as a success factor in the breast cancer care pathway.

“Information about procedures and psychological support. It is important to communicate well. Secure that the information is given and received.” (Success factor related to giving the patient enough information).

Many respondents emphasized the importance of psychosocial support, continuity of care, proper facilities, planning and professional conduct. The factors contributing to the failure of the breast cancer care pathway involved mostly the absence of success factors mentioned above. In addition, the patient's emotional state or reactions, such as denial or fear, were also mentioned in association with the negative outcome of preparation for treatment. Furthermore, the staff lacking time to meet the patient needs were seen as inhibiting the preparations for treatment (Table 2).

The factors contributing to both successful and unsuccessful surgery and reconstruction of the breast were associated with tumour location and type, as well as with the patient's psychosocial and physical state and health.

“Some patients have had reconstructed their breast before they got irradiation. It can then be difficult to get high enough dose due to thin skin. We have to adjust the bolus, and the skin gets very sunburned.” (Lack of success factor related to tumour type and size).

Table 1. Factors for the success and lack of success of diagnostic services in the breast cancer care pathway

Laboratory services	
Successful	Unsuccessful
<ul style="list-style-type: none"> • Rigorous execution of sampling techniques and analyses (5 comments) • Short waiting time, information about laboratory location (2 comments) • Reliable and quick reporting of results (2 comments) • Pleasant behaviour of the staff (2 comments) 	<ul style="list-style-type: none"> • Failures in sample taking, handling and storing (2 comments) • Unpleasant or unhelpful behaviour of the staff (2 comments) • Long waiting time of the appointments and results of the samples (2 comments)
Mammography	
Successful	Unsuccessful
<ul style="list-style-type: none"> • Patient guidance about the examination and what it takes to get optimal mammograms (8 comments) • Being able to execute the examination under optimal conditions and in an optimal manner (5 comments) • Supporting the patient during procedure (3 comments) 	<ul style="list-style-type: none"> • Patient feeling the procedure painful (4 comments) • Anxiety and fear of the patient (4 comments) • Being not able to execute the examination under optimal conditions and in an optimal manner (3 comments) • Other: long waiting time of mammogram results, lack of communication or information, costs of mammography

Some respondents recognized that information self-acquired over the internet and unclear decision-making were factors associated with unsuccessful surgery and reconstruction. Staff competency, patient trust in health care staff and clear communication about breast surgery contribute to successful breast cancer surgery of the patient. On the other hand, comments about unsuccessful surgery were mainly related to technical failures during surgery (Table 2).

“Poorly done operation/reconstruction”.

“Failure in reconstruction technique” (Lack of success factor related to staff performance).

In radiotherapy treatment, the factors contributing to the success or failure of treatment were mainly the same as at the surgery stage, but with different weightings. Most respondents highlighted the importance of understanding all radiotherapy treatment stages by the patient, including the effects and side-effects of radiation.

“Information on the location of the radiotherapy, how it works, the risks involved (burns), the different appointments, the means of reimbursement for transport to get to the radiotherapy every day.” (Success factor related to patient understanding).

However, according to respondents, radiotherapy treatment will not proceed in an optimal manner if the patient is fearful or nervous about it or shows disagreement or signs of inability to continue through the entire treatment process or gets multiple side-effects from the treatment. The most often mentioned factor in radiotherapy treatment was the staff ability to perform optimal radiotherapy treatment, as well as staff competency in general. Furthermore, the importance of multi-professional collaboration of the radiotherapy team was emphasized. Issues contributing to suboptimal radiotherapy treatment were a lack of time, lack of timely patient information and ineffective organization of appointments (Table 2).

Respondents identified informing the patient about the treatment and its possible side-effects among the success factors for chemotherapy, and endocrine and biological therapies. However, most of them agreed that an important factor for potential failure of treatment was the patient's fear about the side-effects of treatment or actual realization of them.

“Severe side-effects which occurs during therapies, treatment cancellations.”

“Fear of side effects of treatment.” (Lack of success factor related to fear of side-effects).

Ensuring good communication in aftercare and follow-up was seen as the most important issue. Importantly, it was recognized that the patient left alone or without any aftercare may result in the failure of the entire care pathway (Table 2).

Discussion and Conclusion

In mammography, the guidance and support given to the patient during the examination were emphasized, in addition to technical performance. Mammography is a somewhat inconvenient procedure and may be painful for some women (28). That is why helping the patient to feel peaceful and relaxed while tolerating optimal amounts of compression is also important for the optimal quality of a mammography image. When it comes to laboratory services, the staff focus seemed to be more on the technical details of the laboratory process than on the fluency of services, which is natural due to the importance of details in their professional knowledge.

Based on this study, it seems that health care staff recognize that the patient needs to be well-informed in a timely manner, especially at the beginning of the care and treatment pathway. The recognition of patient needs may also be due to the adoption of evidence-based practice where reading research studies is essential.

Table 2. Factors for the success and lack of success of treatments in the breast cancer care pathway

Preparation prior to treatment, e.g., information about procedures and psychological support, genetic counselling and preserving fertility	
Successful	Unsuccessful
<ul style="list-style-type: none"> • Enough information with right kind of content (11 comments) • Psychosocial support available for the patient (8 comments) • Other: ensuring continuity of care, proper facilities and planning, professional conduct of staff (4 comments) 	<ul style="list-style-type: none"> • Too little, unclear or wrong time given information to the patient and her care givers (7 comments) • Lack of psychosocial support (4 comments) • Emotional state of the patient (3 comments) • Staff not having enough time for the patient (2 comments)
Surgery and reconstruction of the breast	
Successful	Unsuccessful
<ul style="list-style-type: none"> • Favourable type or location of the cancer or operation type (2 comments) • Good physical and psychosocial state of the patient (2 comments) • Competency of staff performing surgery (3 comments) • Trust on health care professionals (2 comments) • Clear information given to the patient of different aspects of surgery (4 comments) 	<ul style="list-style-type: none"> • Unfavourable type or location of the cancer or operation type (2 comments) • Impaired psychosocial state of the patient, fear (3 comments) • Self-acquired information from the internet and unclear decision making (2 comments) • Some failure in performing surgery (4 comments)
Radiotherapy	
Successful	Unsuccessful
<ul style="list-style-type: none"> • Patient understanding all the stages of radiotherapy treatment including effects of radiation and its side-effects (8 comments) • Other patient related factors: lack or fear, early-stage cancer (3 comments) • Being able to execute optimal RT techniques (5 comments) • Competent radiotherapy professionals (3 comments) • Multiprofessional co-operation of the RT team (3 comments) 	<ul style="list-style-type: none"> • Fear or nervousness of the patient (4 comments) • Disagreement or problems in continuing through the whole treatment period (3 comments) • Side-effects of the RT treatment (2 comments) • Other patient related factors: patient smoking, patient having metastases (2 comments) • Lack of time for the patient - too little staff (4 comments) • Lack of timely information and support (3 comments) • Problems in organising or keeping appointment time (3 comments) • Other staff related factors: suboptimal co-operation of RT-team, suboptimal fixation of the patient (2 comments).
Chemotherapy, endocrine and biological therapies	
Successful	Unsuccessful
<ul style="list-style-type: none"> • Staff is able to clearly inform about the treatment and its side-effects to the patient (5 comments) • Good response to the treatment (2 comments) 	<ul style="list-style-type: none"> • Fear of side-effects and side-effects as such (7 comments) • Lack of information and communication (2 comments)
Aftercare and counselling following treatments	
Successful	Unsuccessful
<ul style="list-style-type: none"> • Ensuring good communication with the patient at the follow up stage (7 comments) • Different ways of ensuring aftercare and follow up (3 comments) • Being attentive and empathetic towards the patients (2 comments) • Ensuring that the patient and her care givers understand the meaning and are involved in the follow up (2 comments) 	<ul style="list-style-type: none"> • No follow-up, patient being left alone (5 comments) • Lack of information or communication (3 comments) • Other: fear, denial, patient returning to special care, not optimal recovery from the treatments (3 comments)

However, in studies about breast cancer patients' unmet needs, the patients and their next of kin have reported a lack of information throughout their treatment process (15-17). Current research studies clearly show that having too little timely information still seems to be a problem for women with breast cancer (16-18). In previous studies, patients have also reported a lack of psychosocial support, individualized care and choice of treatment (15, 18, 19). According to our results, respondents seemed to understand the importance of psychosocial support, especially at the treatment preparation stage where the patient may have difficulties with understanding her illness, not to mention the upcoming treatment.

Several respondents mentioned that they did not know about the success factors for treatments regarding their own specialist work area. It was a bit surprising that only three respondents named the importance of multi-professional teamwork as a success factor for optimal breast cancer care and treatment pathway at the treatment phase. All of the international quality criteria for breast cancer care (8, 10, 12) raise this as an essential element of breast cancer care and treatment quality.

The respondents agreed that for patients at the beginning of their care pathway, the focus seems to be on biological goals and conventional treatment (4). With regard to surgery, radiotherapy, chemotherapy, and endocrine and biological therapies, the staff thought that the main success factors are related to tumours and the physical condition of the patient, as well as the technical performance of therapies, which is largely dependent on staff competency. However, they also mentioned that a lot of success or failure of the process depends on the patient's physiological and psychological state and on the capacity for communication and collaboration during the treatment process. Compared to what patients have reported about supporting their breast cancer treatment pathway (4, 14, 16, 17), the respondents seemed to focus more on the above-mentioned factors. The staff recognized the factors related to tumour size and location, patient feelings, understanding, mental and physical state, health state and their behaviour and commitment to the treatments as affecting the success or contributing to suboptimal flow of the care and treatment pathway in case these issues were of a negative nature.

Performing appropriate follow-up and the availability of staff for counselling in breast cancer care at the follow-up stage are important quality criteria for breast cancer care according to the EUSOMA working group criteria (10). Respondents in our study also highlighted these aspects clearly. In a study concerning breast cancer patients' unmet support needs (18), women who had been treated for breast cancer, brought up the importance of organizing proper follow-up and aftercare. Based on patient experience, there is still space for improvement to reach the situation where no woman with breast cancer will be left alone after the active treatment process is over.

Trustworthiness and Limitations

There are several limitations in this study and the results should be interpreted with caution. Firstly, though we recruited staff members from four different countries for the study, we do not know if the data comprises all these countries. With regard to the Swiss data, which was collected with the survey form in French, we do know that there are respondents from all staff categories although the number of nurses was small compared to the other groups. Only two nurses responded to the study. In addition, the authors do not know where exactly these two nurses were working. This is a pity and somewhat surprising,

since nurses are the ones participating the most in the breast cancer patient care pathway. The research group cannot explain why the nurse response rate was low. It may be due to the coronavirus disease-2019 (COVID-19) pandemic that increased their workload at the time of data collection. However, the pandemic certainly added to the workload of all professional groups that were the subjects of this study.

Although geographical generalization is not the aim of qualitative research, knowing that staff members represent all four countries participating in the study, would have added to the generalizability of the results. However, since the country of origin was not asked from the subjects, in order to collect as little as possible background information for data privacy reasons, we have no knowledge about each respondent's country of origin except for Switzerland, since the Swiss questionnaire was in French and comprised a dataset of its own.

Consistency of the results was ensured by cross-checking the analysis by two other authors in addition to the one conducting the analysis. We tried to ensure credibility by letting the project group members representing the respondent groups comment on the results and the way of interpretation. In terms of conformability, there remains some chance of bias. Although to be a qualitative study, the number of respondents was not particularly small, including four different professional groups with different kinds of viewpoints regarding the topic may have demanded a bigger group of respondents to ensure the data saturation.

In conclusion, at the core of breast cancer care and treatment success seems to be the provision of timely patient information with relevant content at the individual pace the patient is able to adopt. This is essential at the beginning of the treatment process. According to this study, there are several patient-related factors contributing to a successful or unsuccessful care pathway. Staff tend to put more emphasis on patient characteristics and technical performance features of the process compared to those identified by the breast cancer patients themselves. Common aspects for both patients and staff are understanding the importance of aftercare and follow-up, and the fact that the patient should be given a chance to maintain close contact with the care and treatment staff, even after their active treatment process has finished.

Acknowledgements

The authors would like to acknowledge health care staff organising the data collection in their clinics, members that shared their viewpoints for the research as well hospitals taking part the data collection in Tartu University Hospital in Estonia, Oulu University Hospital in Finland, Cantonal Hospital of Freiburg in Switzerland and Haukeland University Hospital in Norway. Authors thank EBreastII project group for supporting the study, especially Floro Cubelo for linguistic comments.

Ethics Committee Approval: The need for an ethical board permit was requested from the Norwegian centre for research data as the Western Norway University of Applied Sciences (HVL) was coordinating the data collection of this study. However, the Norwegian centre for research data responded that the ethical board permit was not necessary since no medical or sensitive data was collected.

Informed Consent: Informed consents of the participants were obtained.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Concept: E.M., B.S., S.K.; Design: E.M., B.S.; Data Collection and/or Processing: E.M., T.S.S., K.S., B.S., L.M., J.A.P.J., L.R., S.K.; Analysis and/or Interpretation: E.M., B.S., M.O., S.K.; Literature Search: E.M.; Writing: E.M., T.S.S., K.S., B.S., L.M., M.O., J.A.P.J., L.R., S.K.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: This study was supported by European Commission Erasmus + Strategic partnership programme grant number 2020-1-EE01-KA203-077941.

References

1. De Bleser L, Depreitere R, De Waele K, Vanhaecht K, Vlayen J, Sermeus W. Defining pathways. *J Nurs Manag* 2006; 14: 553-563. (PMID: 17004966). [\[Crossref\]](#)
2. Kinsman L, Rotter T, James E, Snow P, Willis J. What is a clinical pathway? Development of a definition to inform the debate. *BMC Med* 2010; 8: 31. (PMID: 20507550). [\[Crossref\]](#)
3. About care pathways [Internet]. E-P-A.org. 2021. Available at: <http://e-p-a.org/care-pathways/> (Accessed on January 15, 2022). [\[Crossref\]](#)
4. Hansen F, Berntsen GKR, Salamonsen A. "What matters to you?" A longitudinal qualitative study of Norwegian patients' perspectives on their pathways with colorectal cancer. *Int J Qual Stud Health Well-being* 2018; 13: 1548240. (PMID: 30704375). [\[Crossref\]](#)
5. Baffert S, Hoang HL, Brédart A, Asselain B, Alran S, Berseneff H, et al. The patient-breast cancer care pathway: how could it be optimized? *BMC Cancer* 2015; 15: 394. (PMID: 25963161). [\[Crossref\]](#)
6. Cherif E, Martin-Verdier E, Rochette C. Investigating the healthcare pathway through patients' experience and profiles: implications for breast cancer healthcare providers. *BMC Health Serv Res* 2020; 20: 735. (PMID: 32781993). [\[Crossref\]](#)
7. Clausen C, Strohschein F, Faremo S, Bateman D, Posel N, Fleiszer D. Developing an interprofessional Care Plan for an Older Adult Woman With Breast Cancer: From Multiple Voices to a Shared Vision. *Clin J Oncol Nurs* 2012; 16: E18-E25. (PMID: 22297017). [\[Crossref\]](#)
8. Harbeck N, Gnant M. Breast cancer. *Lancet* 2017; 389: 1134-1150. (PMID: 27865536) [\[Crossref\]](#)
9. Bultz BD, Specia M. Comment on: The EUSOMA Position Paper on the requirements of a specialist breast unit, *Eur J Cancer* 2000, 36, 2288-2293. *Eur J Cancer* 2001; 37: 1579-1580. (PMID: 11510500). [\[Crossref\]](#)
10. Biganzoli L, Marotti L, Hart CD, Cataliotti L, Cutuli B, Kühn T, et al. Quality indicators in breast cancer care: An update from the EUSOMA working group. *Eur J Cancer* 2017; 86: 59-81. (PMID: 28963914). [\[Crossref\]](#)
11. Walsh J, Harrison JD, Young JM, Butow PN, Solomon MJ, Masya L. What are the current barriers to effective cancer care coordination? A qualitative study. *BMC Health Serv Res* 2010; 10: 132. (PMID: 20482884). [\[Crossref\]](#)
12. Prades J, Remue E, van Hoof E, Borrás JM. Is it worth reorganising cancer services on the basis of multidisciplinary teams (MDTs)? A systematic review of the objectives and organisation of MDTs and their impact on patient outcomes. *Health Policy* 2015; 119: 464-474. (PMID: 25271171) [\[Crossref\]](#)
13. Berntsen GK, Gammon D, Steinsbekk A, Salamonsen A, Foss N, Ruland C, et al. How do we deal with multiple goals for care within an individual patient trajectory? A document content analysis of health service research papers on goals for care. *BMJ Open* 2015; 5: e009403. (PMID: 26656243) [\[Crossref\]](#)
14. Waelli M, Minvielle E, Acero MX, Ba K, Lalloué B. What matters to patients? A mixed method study of the importance and consideration of oncology patient demands. *BMC Health Serv Res* 2021; 21: 256. (PMID: 33743693) [\[Crossref\]](#)
15. Zøylner IA, Lomborg K, Christiansen PM, Kirkegaard P. Surgical breast cancer patient pathway: Experiences of patients and relatives and their unmet needs. *Health Expect* 2019; 22: 262-272. (PMID: 30636366) [\[Crossref\]](#)
16. Sandager M, Sperling C, Jensen H, Vinter MM, Knudsen JL. Danish cancer patients' perspective on health care: results from a national survey. *Cognition, Technology & Work* 2015; 17: 35-44. [\[Crossref\]](#)
17. Sandager M, Freil M, Knudsen JL. Please tick the appropriate box: Perspectives on patient reported experience. *Patient Exp J* 2016; 3: 63-79. [\[Crossref\]](#)
18. Edib Z, Kumarasamy V, Binti Abdullah N, Rizal AM, Al-Dubai SA. Most prevalent unmet supportive care needs and quality of life of breast cancer patients in a tertiary hospital in Malaysia. *Health Qual Life Outcomes* 2016; 14: 26. (PMID: 26898558) [\[Crossref\]](#)
19. Shakeel S, Tung J, Rahal R, Finley C. Evaluation of Factors Associated With Unmet Needs in Adult Cancer Survivors in Canada. *JAMA Netw Open* 2020; 3: e200506. (PMID: 32142127) [\[Crossref\]](#)
20. van Egdorn LSE, Legendijk M, van der Kemp MH, van Dam JH, Mureau MAM, Hazelzet JA, et al. Implementation of Value Based Breast Cancer Care. *Eur J Surg Oncol* 2019; 45: 1163-1170. (PMID: 30638807) [\[Crossref\]](#)
21. Yates C, Partridge H, Bruce C. Exploring information experiences through phenomenography. *Library and Information Research* 2012; 36: 96-119. [\[Crossref\]](#)
22. Åkerlind G. Variation and commonality in phenomenographic research methods. *High Educ Res Dev* 2005; 24: 321-334. [\[Crossref\]](#)
23. Viergever R. The Critical Incident Technique: Method or Methodology? *Qual Health Res* 2019; 29: 1065-1079. (PMID: 30600767) [\[Crossref\]](#)
24. Biganzoli L, Cardoso F, Beishon M, Cameron D, Cataliotti L, Coles CE, et al. The requirements of a specialist breast centre. *Breast* 2020; 51: 65-84. (PMID: 32217457) [\[Crossref\]](#)
25. Héquet D, Huchon C, Baffert S, Alran S, Reyat F, Nguyen T, et al. Preoperative clinical pathway of breast cancer patients: determinants of compliance with EUSOMA quality indicators. *Br J Cancer* 2017; 116: 1394-1401. (PMID: 28441385) [\[Crossref\]](#)
26. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006; 3: 77-101. [\[Crossref\]](#)
27. Nowell LS, Norris JM, White DE, Moules NJ. Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *Int J Qual Methods* 2017; 16: 1-13. [\[Crossref\]](#)
28. Moshina N, Sebuødegård S, Evensen KT, Hantho C, Iden KA, Hofvind S. Breast compression and experienced pain during mammography by use of three different compression paddles. *Eur J Radiol* 2019; 115: 59-65. (PMID: 31084760) [\[Crossref\]](#)