

# Role of Oncology Nurse Navigators: An Integrative Review

Jozelle Mae Suazo<sup>1</sup>, Gold Mendoza<sup>1</sup>, Al Canaynay<sup>1</sup>, Roison Andro Narvaez<sup>1,2,\*</sup>

<sup>1</sup> St. Paul University Philippines, Graduate School, Philippines

<sup>2</sup> Philippine Oncology Nurses Association, Philippines

\*Correspondence: Roison Andro Narvaez (rnarvaez@spup.edup.ph)

**Abstract: Background:** Oncology nurse navigators (ONNs) are becoming even more vital as healthcare continues to develop into a more complicated, confusing maze for patients. When many specialists on the treatment team have divergent points of view due to the nature of their respective professions or other factors, the patient may experience feelings of confusion. In the end, this can cause delays in treatment, pose a threat to the established standard of care, and lead to a decrease in patient satisfaction. **Aim:** To enumerate various ways in which ONNs may help improve the quality of life of cancer patients. **Design:** An integrative review. **Results:** A total of 19 studies related to the topic are evaluated. Four main themes namely: provider of psychological support, facilitator of timely care, oncology nurse navigators perception of their role and patient's perception of oncology nurse navigators and 3 sub themes which are: information giver, source of emotional support and coordinator, were identified to be the roles of the ONNs. The findings showed that oncology nurse navigators help reduce patients anxiety and distress, increase patient satisfaction, shorten the time from diagnosis to treatment, provide necessary information, support them emotionally and coordinate their care with the different members of the healthcare team and resources. **Conclusion:** The main function of the ONNs is to address any barrier that may hinder the patient's cancer treatment, survivorship and even palliative care. ONNs make sure that each patient has individualized nursing care according to the patients and their families' needs. **Implications for Practice:** ONNs have the potential to significantly contribute not only to the quality of life of cancer patients but also to the process of achieving better service integration. The result of this integrative review contributes to the growth of the healthcare system by improving accessibility, fairness, efficiency, effectiveness, and the ability to maintain health services throughout time brought about by ONNs.

**Keywords:** Oncology Nurse Navigator, Patient Navigation, Cancer Care

## How to cite this paper:

Suazo, J. M., Mendoza, G.,  
Canaynay, A. ., & Narvaez, R. A.  
(2023). Role of Oncology Nurse  
Navigators: An Integrative Review.  
*World Journal of Cancer and Oncology  
Research*, 2(1), 66–84. Retrieved from  
[https://www.scipublications.com/jou  
rnal/index.php/wjcor/article/view/73  
3](https://www.scipublications.com/journal/index.php/wjcor/article/view/733)

## Academic Editor:

Ashfaq Rehman

Received: May 16, 2023

Accepted: July 23, 2023

Published: July 24, 2023



**Copyright:** © 2023 by the authors.  
Submitted for possible open-access  
publication under the terms and  
conditions of the Creative Commons  
Attribution (CC BY) license  
([http://creativecommons.org/licenses  
/by/4.0/](http://creativecommons.org/licenses/by/4.0/)).

## Highlights

### What is already known about this topic?

1. Patients diagnosed with cancer are often puzzled by treatment plans and confused how to receive appropriate, timely and high-quality therapy.
2. ONNs are specialized nurses who help cancer patients in their treatment plan.
3. ONNs manage the treatment process, empower patients, provide information and support, and connect patients with their healthcare providers.

### What this paper adds?

1. ONNs assist in patient's cancer treatment, survivorship, even in palliative care and extend their roles in finding the resources their patients need.
2. ONNs help patients improve their quality of life by removing the barriers for them to receive optimal care.

3. Importance of ONNs in the healthcare system that institutions might consider implementing ONN programs.

### 1. Introduction

In 1990, an American physician Harold Freeman laid the groundwork for what would later become known as patient navigation. He did this to speed up diagnostic confirmation and ensure that persons with chronic illnesses receive the same treatment from start to finish, regardless of diagnosis [1]. A patient navigator helps people overcome socioeconomic, financial, cultural, bureaucratic, and psychological barriers to health care like when patient navigators cultivate trust and empowerment in the communities they serve by addressing a number of the disparities resulting from language and cultural differences and barriers [2].

Cancer patients and caregivers often face obstacles in accessing timely, high-quality therapy [3, 4, 5]. Lack of healthcare experience, poor health insurance, and difficulties with daily tasks like getting to treatment and taking time off work can be hurdles. One of the most vulnerable groups needing patient navigation are those diagnosed with cancer. Cancer patients and caregivers often struggle to get timely, high-quality therapy [6,7]. These can include unfamiliarity with the healthcare system, insufficient health insurance, and challenges with daily responsibilities like transportation to treatment and taking time off work. Patient navigation improves cancer patients' treatment adherence and wellness. Patient navigators can improve cancer care, patient satisfaction, and health outcomes [8]. These oncology nurses provide physical, social, and emotional care to their patients. Aside from the clinical works they do, they also undertake nonclinical works as patient navigators [9]. Navigators also examine patient needs and design a plan to overcome barriers to high-quality care [10].

They help patients, families, and carers make decisions with the treatment's interdisciplinary team [11]. Activities go beyond care management. They manage the treatment process, empower patients, provide information and support, and connect patients to team specialists. Education empowers patients by teaching them skills, attitudes, and self-awareness. They can manage their health and participate in treatment. Empowered patients engage better with healthcare providers because they are more aware, involved, and responsible [12]. ONNs also help cancer patients in the field of research. These professionals improved patients' treatment satisfaction by letting them know how cancer affects their life and made patients more involved in their care and better prepared for the future [13]. Patient navigation continues to evolve. International navigators are currently healthcare professionals, students, and lay volunteers. Tasks vary by knowledge level [14].

In the Philippines, impoverished cancer patients face high costs. At the moment, navigators in international programs are made up of healthcare professionals, students, and lay volunteers. Depending on their level of knowledge, each has different tasks to do [14]. Whilst locally, the Department of Health-Philippine Cancer Society Inc. (DOH-PCSI) Access Program for Breast Cancer Medicine has already started giving free chemotherapy through a patient navigation system at a hospital in Manila starting in January 2012. This was done to improve the quality of breast cancer treatment. This is one of the nation's first patient navigation programs [15].

As for the researchers' knowledge, no other review was done to understand the role of ONNs in contributing to the betterment of cancer patients' quality of life. This study aims to find scientific articles about oncology nurses who help patients find their way around as nurse navigators. This will show the effects and benefits of ONNs throughout the whole process of managing cancer and how they affect patients' overall health outcomes. This study will help both the patients and their families, who are also having a hard time getting used to the diagnosis of a loved one. This study will also assist health policymakers and healthcare leaders in formulating policies concerning nurse navigation

programs since this program is new in the country and the ONNs are few here in the Philippines. The specific objectives are as follows: 1) define and understand the role of ONNs in the healthcare system; 2) Enumerate various ways in which ONNs may help improve the quality of life of cancer patients; 3) Highlight the significance of nurse navigation in the treatment of cancer and; 4) Give insight to the healthcare industry leaders the importance of developing a program concerning patient navigation and to have an ONN working in each healthcare institution.

## **2. Materials and Methods**

### **2.1. Design**

This research paper employed an integrated review technique of research. The integrative review methodology offers a synthesis of knowledge and shows how important studies' findings can be used in practice [16]. This study employs that technique to narrate and accurately assess publications related to the most recent comprehension of the role of ONNs in improving the quality of life of cancer patients. The researcher followed the Whitemore and Knafl (2005) framework, which includes the following stages: a) issue attribution, b) literature inquiries, c) data appraisal, d) data evaluation, and e) discussion of results of a summary of evidence. It is an approach that allows the inclusion of several approaches and can be more leading in evidence-based nursing practice [17].

### **2.2. Search Strategy**

This study was conducted in January 2023. Google Scholar, PubMed, CINAHL, SAGE, Elsevier databases were all used in the search. In order to look for related literature, keywords were used to search for the associated literatures: oncology nurse navigator, oncology nurse navigator program, nurse navigator, oncology, nurse oncology, and oncology navigator. The literature found were compiled together and go through diligent examination to determine the significant literature to the study.

As shown in [Figure 1](#). PRISMA flow diagram, the initial search yielded 1,056 studies. Another search engine was used to narrow down the studies using the keywords. Eighty-four abstracts were reviewed but only thirty-five full articles have been analyzed. The researchers identified the inclusion and exclusion criteria, hence, a total of 19 articles were included in this integrative review.

### **2.3. Inclusion and Exclusion Criteria**

The beginning of the search of the literature had examined the level of inclusion and exclusion. The identified literature for inclusion were literature published within 2008 – 2023 due to the novelty of the topic and the need for a holistic approach to studying the program in question due to the paucity of available resources, with an English language, full-text context, patient and/or nurse inclusion, non-review studies, and conducted research. The incorporated articles were related to the role of oncology nurse navigator in improving the quality of life of cancer patients.

On the other hand, the study that excluded were inaccessible of full texts, published articles year 2008 behind, a language other than English, patient and/or nurse exclusion and studies as review and synthesis methods. The book chapters are not to be included in this study.

### **2.4. Data Evaluation/ Quality Appraisal**

The researchers utilized the Sparbel and Anderson (2000) tool in data evaluation. It is a complete table to organize the articles included in the review [18]. It includes the author's name, year of publication, design, setting, sample size and participants, methods and/or instruments used, the focus of the study and its findings.

As shown on Appendix A (Supplementary File), to evaluate the reliability, worth, and significance of each article that was included, the researchers make use of the Mixed Methods Appraisal Tool (MMAT) tool. It is a critical evaluation instrument for the appraisal phase of systematic mixed studies reviews which enables evaluation of the methodological quality of studies in five categories [19]. The articles included were divided into 5 category study designs namely: qualitative, quantitative randomized control trial, quantitative non-randomized, quantitative descriptive and mixed methods. Each category has five methodological quality criteria which can be answered by yes, no and can't tell. Each methodological quality criteria has a point of 1 if the answer is yes and a score of 0 if the answer is no, and N/A if the result is can't tell. The total score of each studies and divided it by 5 to get the total score of the the studies and interpret it with strong if the score is 1, moderate-strong if the score is 0.80, moderate if the score is 0.60, mild-moderate is the score is 0.40, and mild if the score is 0.20.

In addition, the studies included used the Hierarchy of Evidence for Intervention Studies to give a level of evidence based on their methodological quality, validity, and usefulness to patient care [20]. The tool is divided into seven types of evidences with corresponding level of evidence as follows: Level I- Systematic review or meta-analysis, Level II- Randomized controlled trial, Level III- Controlled trial with- out randomization, Level IV- Case-control or cohort study, Level V- Systematic review of qualitative or descriptive studies, Level VI- Qualitative or descriptive study and Level VII- Expert opinion or consensus. Expert review was also utilized and the results were validated and agreed upon.

### 3. Results

Table 1 shows the total number of included studies is nineteen (n=19). Out of the 19 related literature, 4 studies are qualitative, the other 13 literature are quantitative and 2 have a mixed-method research design. Among the studies, the majority were conducted in the United States of America (n=10) and Canada (n=6). The rest were done in Brazil (n=1), Denmark (n=1) and Israel (n=1). As noted, most of the studies were done in the western continent with only one in Europe and one in Asia.

The methods used in data collection are the use of questionnaire (n=4), face-to-face interview (n=8), review of electronic records (n=5) and use of survey (n=2). In terms of the level of evidence, there are four (n=4) LOE II, two (n=2) LOE III, two (n=2) LOE IV, eleven (n=11) LOE VI. As shown in Tables 2.1 to 2.5, the MMAT yielded four (n=4) strong qualitative studies, nine (n=9) strong quantitative studies, four (n=4) moderate-strong quantitative studies and two (n=2) moderate-strong mixed method articles.

In terms of selecting the samples the following methods were used: purposive sampling (n=10), convenience sampling (n=4), random sampling (n=4) and cluster sampling (n=1). The studies having cancer patients as participants have a mean sample size of 272 while those articles having ONNs as participants have a mean sample size of 34. The subjects included are patients with breast, colorectal, gastrointestinal and lung cancer and ONNs.

Four themes have been extracted from the seventeen studies that were reviewed. The themes are: *provider of psychological support, facilitator of timely care, oncology nurse navigators perception of their role and patient's perception of oncology nurse navigators*. Three sub themes were extracted from the main theme patient's perception of oncology nurse navigators which are: information giver, source of emotional support and coordinator.

#### 1. *Provider of Psychological Support*

Out of nineteen studies, five studies found that ONNs provide psychological support to the patient by guiding the patient on their journey toward the course of treatment [21, 22, 23, 24, 25]. Patients in contact with ONNs have higher satisfaction levels, lower distress, anxiety and depression levels.

On the other hand, it was mentioned that there was no relevant difference in distress, weariness, quality of life, and healthcare use after an ONN intervention [26].

## 2. *Facilitator of Timely Patient Care*

Five of the studies mentioned that those who have been diagnosed with cancer and who are possibly developing cancer benefit from the different roles of an ONN, particularly with their role as facilitator of timely patient care [26, 27, 28, 29, 30]. The majority of the respondents of these studies recognize that there is a shorter time frame from diagnosis to the beginning of therapy, an increase in patient and caregiver awareness, a greater adherence to the suggested care, and an improvement in the overall quality of life.

## 3. *Oncology Nurse Navigators Perception of their Roles*

Four studies discussed the perception of nurses of their job as ONNs [31, 32, 33, 34]. Among the roles mentioned in the studies are: patient advocate, provide patient-focused care and educational support.

“Being an advocate was not going to change the course of the disease but helped them cope with what they were experiencing at the time.” [34]

## 4. *Patient’s Perception of Oncology Nurses*

Among nineteen studies that have been reviewed, five articles talked about the role of ONNs in the eyes of oncology patients [10, 33, 34, 35, 36]. Prior to implementing a role intended to improve care for a particular group, it is important to comprehend patient perspectives regarding their experiences and needs.

### 3.1. *Information giver*

Four studies talked about ONNs being the source of information throughout the participant's cancer journey [10, 33, 34, 36]. Informational support is very vital to oncology patients. Because of the additional information provided by the nurse navigators, they expressed the belief that knowledge helps them feel less anxious and move emotionally forward and feel more at ease in actively managing their sickness [33, 36].

“She explained everything that was going to happen with the surgery.” [33]

### 3.2. *Source of Emotional Support*

Two studies showed that oncology patients highly valued the ONNs as their source of emotional support that would provide them with consolation, support and comfort during the most challenging phases of their illness [10, 36].

“She brings us emotional security... and you know that you can count on her.” [36]

### 3.3. *Coordinator*

Three studies mentioned how helpful ONNs are in coordinating their treatment plans [34, 35, 36]. Referrals to resources, guidance on aspects of care as well as schedule of visits and building relationships with other healthcare workers were among the works of oncology nurse navigators.

“She creates the links between myself and the hospital MDs.” [36]

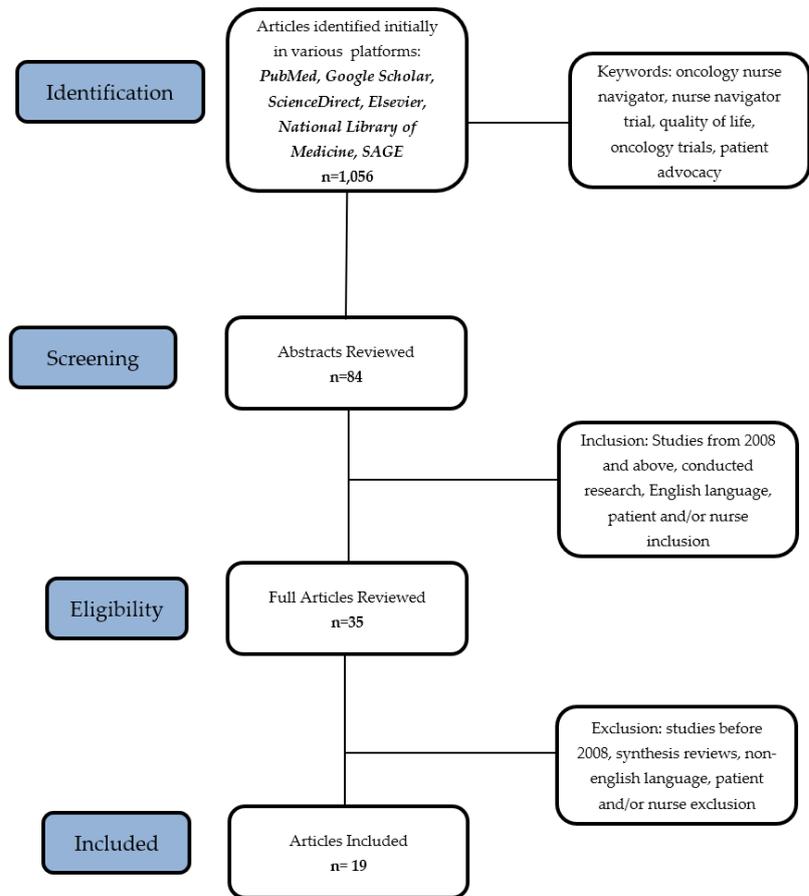


Figure 1. PRISMA Flow Diagram

**Table 1. Characteristics of the study.**

Study	Design and Data Collection	Participants and Setting	Aim and Findings	Level of Evidence	Themes
Adler, et.al (2019) Israel [29]	Retrospective Cohort Study Review of records	1035 female breast cancer patients: 225 telemedical care (TMC) patients and 810 non-TMC patients Maccabi Healthcare Services, Israel	Aim: To describe breast cancer patients who used telemedicine to get telephone-based ONN consultations (TMC patients) and to examine their healthcare use (HCU) one year before and after using the service Findings: Following the initial appointment, there was a considerable rise in outpatient care and prescription use.	IV	Facilitator of Timely Patient Care
Bell, et.al (2020) USA [25]	Descriptive Questionnaire	297 cancer patients Ohio, USA	Aim: To effectively evaluate the impact of a navigation program on cancer patients' distress and health-related quality of life. Findings: Distress Thermometer (DT) scores and Functional Assessment of Cancer Therapy – General (FACT-G) overall scores both significantly increased. Patients were quite satisfied with the navigation.	VI	Psychological Support
Carroll, et.al (2010) USA [10]	Phenomenological Individual in-depth semi-structured interview	35 patients with breast or colorectal cancer New York, USA	Aim: To investigate the impact of navigation on patients' perceptions of the effectiveness of their cancer treatment. Findings: All of these aspects of navigation- emotional support, assistance with information needs and problem-solving, and logistical coordination of cancer care- were highly valued.	VI	Patient's Perception of Oncology Nurses
Gordils-Perez, et.al. (2017) USA [45]	Descriptive Cohort study Review of electronic records and postimplementation surveys	gynecology group (historic N = 32, postimplementation N = 93) and hematology group (historic N = 75, postimplementation N = 89) Rutgers Cancer Institute of New Jersey in New Brunswick	Aim: To assess how ONN affects patients with hematologic or gynecologic malignancies' access to care, their satisfaction with their care and with their providers, and their participation in clinical trials. Findings: A significant reduction in the mean number of days between the initial provider visit and the start of treatment was seen. Also, both groups' mean survey satisfaction scores were high on the care received. However, clinical trial enrollment was not increased by the navigation program.	IV	Facilitator of Timely Patient Care

Hebert and Fillion (2011A) Canada [36]	Qualitative Descriptive semi-directed individual interviews and socio-demographic data forms	5 cancer patients Quebec, Canada	Aim: To investigate the needs of cancer patients and the support offered by the ONN along the care trajectory. Findings: People with cancer most frequently express emotional needs than physical ones. They value the ONN's presence throughout the care trajectory in order to satisfy their requirements, the development of a trusting relationship, and the experience of being listened to, all of which support living with the disease.	VI	Patient's Perception of Oncology Nurses
Hebert and Fillion (2011B) Canada [32]	Qualitative Descriptive Individual interviews	10 oncology nurse navigators Quebec, Canada	Aim: To investigate the needs of cancer patients and the support offered by the ONN along the care trajectory. Findings: ONNs claimed to have provided support interventions for many kinds of requirements, particularly in the informational and practical domains, such scheduling appointments. The findings also imply that a needs analysis is a must before assistance.	VI	Oncology Nurse Navigators Perception of their Roles
Jeyathevan, et.al (2017A) Canada [33]	Qualitative Descriptive Individual patient interview and focus group with ONNs	4 lung cancer patients and 4 oncology nurse navigators Canada	Aim: To investigate how ONNs can help lung cancer patients feel more empowered during the cancer treatment's diagnostic stage. Findings: Being an advocate, support in education, individualized symptom care, and resource coordination were highlighted as ONN roles in promoting patient empowerment.	III	Patient's Perception of Oncology Nurses/ Oncology Nurse Navigators Perception of their Roles
Jeyathevan, et.al (2017B) Canada [34]	Phenomenological Semi-structured interview	4 lung cancer patients and 4 oncology nurse navigators Canada	Aim: To investigate how ONNs aid adult patients with lung cancer in maintaining continuity of care during the diagnostic stage of cancer treatment. Findings: The identified functions of an ONN are the following: care that is patient-centered, needs evaluations, collaborative decision-making, being accessible, and removal of barriers.	VI	Patient's Perception of Oncology Nurses/ Oncology Nurse Navigators Perception of their Roles
Lubejko, et. al (2017) USA [31]	Structured Role Delineation Survey Face-to-face structured Interview	118 oncology nursing society member (oncology nurse navigator and staff nurse) USA	Aim: To clarify the function and assess whether an ONN is necessary Findings: It was discovered that the ONN function is changing and that there are disparities between the ONN's duties and those of the clinical or staff nurse.	VI	Oncology Nurse Navigators Perception of their Roles

Mertz, et.al (2017) Denmark [22]	Randomized Control Trial Questionnaires	50 patients with breast cancer who are distressed and 66 who were not distressed Copenhagen University, Denmark	Aim: To determine if an ONN intervention is practical and effective at reducing distress, depression, anxiety and health-related quality of living in breast cancer survivors. Findings: Compared to the control group, those who had ONN reported considerably higher levels of treatment and rehabilitation satisfaction as well as reduced levels of distress, anxiety, and depression.	II	Psychological Support
Munoz, et.al (2018) USA [26]	Retrospective Study; Randomized Control Study Record review	120 GI cancer patients: experimental group: 34 men, 26 women/ control group: 35 men, 25 women Community Regional Medical Center and the Clovis Community Medical Center, California, USA	Aim: To ascertain whether adding a GI ONN to the multidisciplinary cancer care team is connected with higher patient quality of care. Findings: Patients having an ONN experienced a shorter delay between diagnosis and start of treatment.	II	Facilitator of Timely Patient Care
Pedersen, et.al (2013) Canada [35]	Descriptive Qualitative Face-to face structured interview/ telephone interview	12 breast cancer patients Winnipeg, Manitoba, Canada	Aim: To define the function of the ONN using the narratives and descriptions of younger breast cancer patients. Findings: The role of the ONN included two facets: "Processual facets" and "Personal qualities".	VI	Patient's Perception of Oncology Nurses
Rohsig, et.al (2019) Brazil [28]	Retrospective, descriptive study Review of electronic records	263 breast cancer patients Porto Alegre, Brazil	Aim: To discuss the outcomes of the first nurse navigation program in a breast cancer center at a private, nonprofit hospital in Porto Alegre, Brazil Findings: Time from diagnosis to the commencement of therapy decreased from 24 days in 2014 to 18 days in 2017, and 97% said they were satisfied or extremely satisfied with the treatment the ONN delivered.	VI	Facilitator of Timely Patient Care
Skrutkowski, et.al (2008) Canada [44]	Randomized Control Trial Questionnaire and Review of health records	113 patients with lung cancer and 77 patients with breast cancer (93- intervention group; 97- control group) Quebec, Canada	Aim: To investigate the effects of nursing care continuity provided by an ONN in symptom alleviation and outcomes for patients with lung or breast cancer. Findings: There were no discernible changes in the groups' levels of symptom distress, weariness, quality of life, or use of healthcare.	II	Psychological Support

Stirling, et.al (2022) USA [27]	Descriptive cross-sectional study review of electronic records	1370 cancer patients receiving chemotherapy Sharp Healthcare, Southern Carolina, USA	Aim: To look into how ONNs affect the amount of adult cancer patients who are admitted to hospitals and go to the ER after receiving outpatient treatment. Findings: No significant differences were found in Emergency Room visits and Hospital Admissions by ONN group.	VI	Effect on Timely Management
Swanson and Kochs (2009) USA [23]	Retrospective chart review Face-to-face interview	55 cancer patients: 20 women and 35 men St. Elizabeth Regional Health Center, Midwestern, USA	Aim: To know whether nurse navigation decreases the distress of adult cancer patients. Findings: Patients that were seen by ONN have lower distress scores upon discharge.	VI	Psychological Support
Wagner, et.al. (2014) USA [21]	Randomized control trial Questionnaire	251 participants with breast, colorectal or lung cancer Washington and Northern Idaho, USA	Aim: To know whether nurse navigation is effective in enhancing patient experience and quality of life Findings: Patients using nurse navigators reported much less issues with care, particularly with information, care coordination, and psychosocial care.	II	Psychological Support
Williams, et. al (2022) USA [30]	Descriptive Survey	96 breast cancer patients: 54 navigated, 42 non-navigated University of New Mexico Comprehensive Cancer Center	Aim: To assess the effectiveness of the breast cancer nurse navigator program at the University of New Mexico Comprehensive Cancer Center in addressing cancer care gaps for an underrepresented, rural, and economically disadvantaged population. Findings: Patients who were navigated expressed a lower desire for an after-treatment summary compared to non-navigated patients, and they more strongly agreed that they were prepared for the start of treatment and that calls were swiftly returned.	VI	Facilitator of Timely Patient Care
Yackzan, et.al (2019) USA [24]	Quantitative Retrospective review of oncology Press Ganey outpatient satisfaction	315 cancer patients with contact with ONN; 172 no contact with ONN Lexington, Kentucky	Aim: To assess how patient satisfaction is affected by contact with an ONN. Findings: Mean scores and percentile rank comparisons in satisfaction surveys were higher in the group in contact with ONN.	III	Psychological Support

#### 4. Discussion

The included studies explored the role of ONNs in improving the quality of life of patients with different kinds of cancer. The aims of the study- to define the role of these nurses and enumerate ways in which ONNs may help improve cancer patients' quality of life, were discussed. With different patient navigation strategies being used in cancer care, the role of the ONN has continued to expand. Patient navigation in cancer care could be broadened even more in order to meet the patients needs and enhance their quality of life.

##### *4.1. Aids in Overcoming Challenges within the Healthcare System*

When a patient is given a diagnosis of cancer, the multidisciplinary care team develops a treatment plan that is then presented to the patient by a physician. This plan is intended to assist in guiding treatment options. When many specialists on the treatment team have divergent points of view due to the nature of their respective professions or other factors, the patient may experience feelings of confusion. In the end, this can cause delays in treatment, pose a threat to the established standard of care, and lead to a decrease in patient satisfaction [37]. Every cancer patient is unique, and so is their experience of treatment for the disease, which can throw unanticipated unexpected turns into treatment regimens at inconvenient times. It is likely that some patients have problematic living situations due to variables such as distance traveled or absence of public transportation. It is likely that some individuals have difficulty communicating related to language barriers, whilst others may have difficulties with memory or organization. Before a person has been treated for their condition, it can be challenging to ascertain the precise challenges they may be having. This is where the cancer patient navigators come in, to maintain constant communication between the patient and their family throughout the duration of the process [38].

According to the findings of the studies, ONNs are critically important in their role as patient advocates, ensuring that all patients receive the highest quality of care beginning with the preliminary consultation and continuing throughout the entirety of the care plan for each individual patient [39]. Because they had a foundation in nursing, a complete grasp of oncology components, and a thorough comprehension of the diagnostic evaluation phase, the oncology nurse navigators were highly skilled at advocating for their patients. This was one of the most important aspects of their job [33]. The majority of patient navigator programs in transitional care employ healthcare professionals, primarily registered nurses, who have both the clinical expertise and the system experience necessary to be able to perform advanced tasks. These professionals are responsible for guiding high-needs patients along their treatment pathways [40]. During the course of therapy, the importance of the nurse's role in providing continuity of care as patients move from the hospital to their own homes is emphasized.

Furthermore, one of the roles of ONNs that was highlighted in the studies was care coordination. Care coordination is an essential component of providing high-quality patient care regardless of the patient's health, disease, or location, and it is an important aspect of oncology nursing [31]. They are not only responsible for managing the patient's treatment schedule, check-ups, and referrals, but they are also responsible for supporting the patient with concerns such as transportation, childcare, and financial resources [31,34]. This is one of the extended roles of ONNs from its previous definition. They are the overall coordinator of their patients' needs.

##### *4.2. Ensuring High-quality, Appropriate and Timely Patient Care*

The studies showed that ONNs should reach out to patients with cancer or those at risk of it and their caregivers in order to assist them in overcoming any healthcare system hurdles they may be encountering and to facilitate timely and effective access to care throughout the entirety of the cancer journey [41]. This indicates that the provision of this service or commencement of this program ought to begin promptly. It was discovered that having an ONN present early on in the course of cancer treatment, in collation to

improved standard care, resulted in a significantly better patient experience and significantly fewer problems with care [21]. When those working in healthcare, particularly ONNs, are able to manage their time more effectively, they are able to complete a greater quantity of work, the work that they complete will be of a higher quality, and they will miss fewer deadlines. When terrifying test results like a cancer diagnosis are received, ONNs not only provide referrals and knowledge quickly, but they also offer a great service for the community as a whole [40]. Also, ONNs have a significant amount of potential to increase the percentage of patients who are satisfied with cancer care services and who finish receiving treatment. In the foreseeable future, it is strongly recommended that ONNs assist with interdisciplinary care [42]. The outcomes for cancer patients are improved by ONNs because the delivery of care may be carried out in a more timely manner.

In addition, it is helpful for ONNs to know what their patients require so that they can appropriately address them. This topic was covered in some of the studies that were examined. The overall quality of life of cancer patients undergoing treatment is intended to be enhanced by the use of person-centered [35]. A further benefit of gaining this understanding is that it will empower patients and their families to take an active role in the formulation of their treatment strategy. Also, it is really important for ONNs to comprehend the requirements of their patients [43]. They will be able to give the necessary assistance for them and respond effectively to any issues that may arise.

Overall, the articles that were looked over show that ONNs now play a more significant function. Screening and diagnosis were the initial stages of patient navigation; however, this process is now ongoing all the way through survival and care provided at the end of life [31]. Some of these additional tasks revolve around the psychological aspects of therapy and include things like screening for signs of distress, facilitating difficult conversations, communicating with survivorship care providers, and providing support for advanced care planning.

On the other hand, two of the reviewed studies resulted in no significant change in hospital visits, symptom alleviation, fatigue, distress and quality of life among the navigated participants. This was because the symptoms of the post-chemo navigated and non-navigated patients visiting the hospital are the same [27, 44]. Also, in the result of one study, participation of the participants in clinical trials was not increased [45]. To fully comprehend the long-term financial and operational results of ONNs, more investigation is required.

The COVID-19 pandemic has brought challenges to the ONNs as well. A study also mentioned that during the first phase of the pandemic, the number of patients using the diagnostic services dropped, the routines of those receiving cancer treatment changed, and there was a rise in virus exposure [46]. Teleconsult and diagnostics access via digital platforms are found to be difficult as well. However, ONNs focused on maintaining the services and giving information about the COVID-19 virus and keeping the regular therapeutics and early diagnostics procedures. They also innovated the drive-thru service for the application of medicines. This shows that ONNs must have scientific knowledge, technical expertise, and imagination to devise activities that can ensure the efficacy and quality of nursing treatment.

Moreover, according to a research the evolving requirements of their patients had a significant impact on ONNs' roles and responsibilities as navigators [47]. The findings of their study demonstrate that ONNs have flexibility, versatility and ability to quickly train and deploy for an emergency situation. ONNs keep an eye on reported problems throughout the entire cancer care continuum, from screening to survivorship and end of life care.

### **4.3. Implications for Practice**

By promoting patient-centered care in which patients receive timely, seamless, culturally appropriate guidance and assistance for increasing their health literacy, the nurse navigator, who serves as the focal point of the interdisciplinary team, has the potential to make a significant contribution to the effort to reform the healthcare system. The ability of a patient to engage in shared decision-making is substantially affected by their degree of health literacy, which enables them to more successfully navigate the resources they require. In addition to this, it contributes to the growth of the healthcare system by improving accessibility, fairness, efficiency, effectiveness, and the ability to maintain health services throughout time. These benefits become more apparent during transitions from acute to long-term care, which is precisely when the nurse navigator has the potential to make a significant contribution to the process of achieving better service integration. The nurse navigator profession holds a lot of potential for helping people who are underserved or are going through treatment patterns that aren't connected with one another, which is a group that is always growing and includes a lot of people who have difficult and chronic conditions.

### **5. Limitations and Recommendations**

The study's limitation is that it only included papers from certain countries. A number of reviewed articles were done in the USA and Canada. Only a few were performed in different countries hence, the perspective of other cancer patients living outside those areas were not explored. It is recommended to do further research to consider other roles of oncology nurse navigators in improving cancer patient's quality of life particularly in the Philippines.

Moreover, a number of studies utilized the review of medical records in which patients cannot express their specific point of view on the role of ONNs that may improve the quality of their life. A qualitative approach using interviews might be a better option to extract a more accurate response on the topic.

The results of the included articles showed that ONNs played a significant role in improving the quality of life of cancer patients. The researchers recommend considering an ONN program in hospitals and cancer institutions to help oncology patients and their families have a better experience in dealing with their cancer treatment.

### **6. Conclusion**

The synthesis presented the functions of oncology nurse navigators in enhancing cancer patients' quality of life. Their main goal is to address any barrier that may hinder the patient's cancer treatment, survivorship and even palliative care. Oncology nurse navigators make sure that each patient has individualized nursing care according to the patients and their families needs. They ensure that the patients and their families will be given the best options, will have informed decisions and active involvement in the treatment plan.

To improve the life of oncology patients, an oncology nurse navigator entails in-depth understanding, specialized abilities, and sound clinical judgment. With the help of oncology nurse navigators, patients are able to reduce treatment anxiety, able to get timely and appropriate therapy and improve level of satisfaction.

### **7. Patents**

N/A

**Author Contributions:** JMS, GM & AC: Conceptualization, Methodology, Formal analysis, Investigation, Data curation, Writing – original draft, Project administration. RAN: Conceptualization, Formal analysis, Investigation, Supervision, Validation, Visualization, Writing – review & editing

**Funding:** N/A

**Data Availability Statement:** N/A

**Acknowledgments:** The authors acknowledges the moral support and guidance of St. Paul University Philippines – Graduate School

**Conflicts of Interest:** The authors declare no conflict of interest.

## Appendix A (Supplementary File)

**Table 2.1. MMAT Scoring- Qualitative Studies**

Qualitative	Is the qualitative approach appropriate to answer the research question?	Are the qualitative data collection methods adequate to address the research question?	Are the findings adequately derived from the data?	Is the interpretation of results sufficiently substantiated by data?	Is there coherence between qualitative data sources, collection, analysis and interpretation?	Total Points	Score	Quality
Pedersen, et.al (2013). An Exploration of the Patient Navigator Role: Perspectives of Younger Women With Breast Cancer. <a href="http://dx.doi.org/10.1188/14.ONE.77-88">http://dx.doi.org/10.1188/14.ONE.77-88</a>	1	1	1	1	1	5/5	1	Strong
Jeyathevan, et.al. (2017). The role of oncology nurse navigators in facilitating continuity of care within the diagnostic phase for adult patients with lung cancer. <a href="https://doi.org/10.5737/236880762717480">https://doi.org/10.5737/236880762717480</a>	1	1	1	1	1	5/5	1	Strong
Jeyathevan, et.al. (2017). The role of oncology nurse navigators in enhancing patient empowerment within the diagnostic phase for adult patients with lung cancer. <a href="https://doi.org/10.5737/23688076272164170">https://doi.org/10.5737/23688076272164170</a>	1	1	1	1	1	5/5	1	Strong
Carroll, et.al (2010). Patients' Experiences with Navigation for Cancer Care. <a href="https://doi.org/10.1016/j.pec.2009.10.024">https://doi.org/10.1016/j.pec.2009.10.024</a>	1	1	1	1	1	5/5	1	Strong

**Table 2.2. MMAT Scoring- Quantitative- Randomized Controlled Trials**

Quantitative randomized controlled trials	Is randomization appropriately performed?	Are the groups comparable at baseline?	Are there complete outcome data?	Are outcome assessors blinded to the intervention provided?	Did the participants adhere to the assigned intervention?	Total Points	Score	Quality
Wagner, et.al. (2014). Nurse navigators in early cancer care: a randomized, controlled trial. <a href="https://doi.org/10.1200%2FJCO.2013.51.7359">https://doi.org/10.1200%2FJCO.2013.51.7359</a>	1	1	1	0	1	4/5	0.8	Moderate-Strong
Mertz, et.al. (2017). The effects of individually tailored nurse navigation for patients with newly diagnosed breast cancer: a randomized pilot study. <a href="https://doi.org/10.1080/0284186X.2017.1358462">https://doi.org/10.1080/0284186X.2017.1358462</a>	1	1	1	1	1	5/5	1	Strong
Skrutkowski, et.al (2008). Impact of a Pivot Nurse in Oncology on Patients With Lung or Breast Cancer: Symptom Distress, Fatigue, Quality of Life, and Use of Healthcare Resources. <a href="https://doi.org/10.1188/08.onf.948-954">https://doi.org/10.1188/08.onf.948-954</a>	1	1	1	1	1	5/5	1	Strong
Munoz, et.al (2018). Multidisciplinary Cancer Care Model: A Positive Association Between Oncology Nurse Navigation and Improved Outcomes for Patients With Cancer. <a href="https://doi.org/10.1188/18.cjon.e141-e145">https://doi.org/10.1188/18.cjon.e141-e145</a>	1	1	1	0	1	4/5	0.8	Moderate-Strong

**Table 2.3. MMAT Scoring- Quantitative- Non-randomized Controlled Trials**

Quantitative non- randomized	Are the participants representative of the target population?	Are measurements appropriate regarding both the outcome and intervention (or exposure)?	Are there complete outcome data?	Are the confounders accounted for in the design and analysis?	During the study period, is the intervention administered (or exposure occurred) as intended?	Total Points	Score	Quality
Stirling, et.al. (2022). Oncology Nurse Navigator Effect on Emergency Department Visits and Hospital Admissions of Adults With Cancer Post-Outpatient Chemotherapy. <a href="https://doi.org/10.1188/22.onf.595-612">https://doi.org/10.1188/22.onf.595-612</a>	1	1	1	1	1	5/5	1	Strong
Yackzan, S. (2019). Outcome Measurement: Patient Satisfaction Scores and Contact Oncology Nurse Navigators. <a href="https://doi.org/10.1188/19.cjon.76-81">https://doi.org/10.1188/19.cjon.76-81</a>	1	0	1	1	1	4/5	0.8	Moderate-Strong
Adler, et.al. (2019) Healthcare utilization of breast cancer patients following telephone-based consultations of oncology nurse navigator via telemedical care. <a href="https://doi.org/10.1371/journal.pone.0216365">https://doi.org/10.1371/journal.pone.0216365</a>	1	1	1	1	1	5/5	1	Strong
Gordils-Perez, et.al. (2017). Oncology Nurse Navigation: Development and Implementation of a Program at a Comprehensive Cancer Center. <a href="https://doi.org/10.1188/17.cjon.581-588">https://doi.org/10.1188/17.cjon.581-588</a>	1	1	1	1	1	5/5	1	Strong

**Table 2.4. MMAT Scoring- Quantitative- Descriptive Studies**

Quantitative descriptive	Is the sampling strategy relevant to address the research question?	Is the sample representative of the target population?	Are the measurements appropriate?	Is the risk of nonresponse bias low?	Is the statistical analysis appropriate to answer the research question?	Total Points	Score	Quality
Swanson, J. and Kochs, L. (2009). The Role of the Oncology Nurse Navigator in Distress Management of Adult Inpatients With Cancer: A Retrospective Study. <a href="https://doi.org/10.1188/10.onf.69-76">https://doi.org/10.1188/10.onf.69-76</a>	1	1	1	0	1	4/5	0.8	Moderate-Strong
Rohsig, et.al. (2019). Nurse Navigation Program: Outcomes From a Breast Cancer Center in Brazil. <a href="https://doi.org/10.1188/19.cjon.E25-E31">https://doi.org/10.1188/19.cjon.E25-E31</a>	1	1	1	1	1	5/5	1	Strong
Lubejko, et.al. (2017) Oncology Nurse Navigator: Result of the 2016 Role Delineation Study <a href="https://doi.org/10.1188/17.cjon.43-50">https://doi.org/10.1188/17.cjon.43-50</a>	1	1	1	1	1	5/5	1	Strong
Bell, J.et.al (2020). Patient Navigation Effect on Cancer Patients' Quality of Life and Distress. <a href="https://www.jons-online.com/issues/2020/october-2020-vol-11-no-10/3148-patient-navigation-effect-on-cancer-patients-quality-of-life-and-distress">https://www.jons-online.com/issues/2020/october-2020-vol-11-no-10/3148-patient-navigation-effect-on-cancer-patients-quality-of-life-and-distress</a>	1	1	1	1	1	5/5	1	Strong
Williams, et.al (2022). Patient-Reported Measures of a Breast Cancer Nurse Navigator Program in an Underserved, Rural, and Economically Disadvantaged Patient Population. <a href="https://doi.org/10.1188/22.onf.532-539">https://doi.org/10.1188/22.onf.532-539</a>	1	1	1	1	1	5/5	1	Strong

**Table 2.5. MMAT Scoring- Mixed Methods**

Mixed methods	Is there an adequate rationale for using a mixed methods design to address the research question?	Are the different components of the study effectively integrated to answer the research question?	Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?	Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?	Total Points	Score	Quality
Hébert, J., & Fillion, L. (2011). Gaining a better understanding of the support function of oncology nurse navigators from their own perspective and that of people living with cancer: Part 1. <a href="https://doi.org/10.5737/1181912x2113338">https://doi.org/10.5737/1181912x2113338</a>	1	1	1	1	0	4/5	0.8	Moderate-Strong
Hébert, J., & Fillion, L. (2011). Gaining a better understanding of the support function of oncology nurse navigators from their own perspective and that of people living with cancer: Part 2. <a href="https://doi.org/10.5737/1181912x212114121">https://doi.org/10.5737/1181912x212114121</a>	1	1	1	1	0	4/5	0.8	Moderate-Strong

## References

- [1] Freeman, H., & Rodriguez, R. (2011). History and principles of patient navigation. *Cancer*, 117(15 Suppl), 3539–3542. <https://doi.org/10.1002/cncr.26262>
- [2] Natale-Pereira, A., Enard, K. R., Nevarez, L., & Jones, L. A. (2011). The role of patient navigators in eliminating health disparities. *Cancer*, 117(S15), 3541–3550. <https://doi.org/10.1002/cncr.26264>
- [3] Hess, L. M., & Pohl, G. (2013). Perspectives of quality care in cancer treatment: a review of the literature. *American health & drug benefits*, 6(6), 321–329 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4031722/>
- [4] Wang, T., Molassiotis, A., Chung, B. P. M., & Tan, J. Y. (2018). Unmet care needs of advanced cancer patients and their informal caregivers: a systematic review. *BMC Palliative Care*, 17(1), 1–29. <https://doi.org/10.1186/s12904-018-0346-9>
- [5] Parajuli, J., & Hupcey, J. E. (2021). A Systematic Review on Barriers to Palliative Care in Oncology. *American Journal of Hospice and Palliative Medicine*, 38(11), 1361–1377. <https://doi.org/10.1177/1049909120983283>
- [6] Dalton, M., Holzman, E., Erwin, E., Michelen, S., Rositch, A. F., Kumar, S., ... & Ginsburg, O. (2019). Patient navigation services for cancer care in low-and middle-income countries: a scoping review. *PLoS One*, 14(10), e0223537. <https://doi.org/10.1371/journal.pone.0223537>
- [7] Freund, K. M., Battaglia, T. A., Calhoun, E., Darnell, J. S., Dudley, D. J., Fiscella, K., & Writing Group of the Patient Navigation Research Program. (2014). Impact of patient navigation on timely cancer care: the Patient Navigation Research Program. *Journal of the National Cancer Institute*, 106(6), dju115. <https://doi.org/10.1093/jnci/dju115>
- [8] Lee, T., Ko, I., Lee, I., Kim, E., Shin, M., Roh, S., Yoon, D., Choi, S., & Chang, H. (2011, September). Effects of Nurse Navigators on Health Outcomes of Cancer Patients. *Cancer Nursing*, 34(5), 376–384. <https://doi.org/10.1097/ncc.0b013e3182025007>
- [9] Sharpe, K., Scheid, K. (2018). The Benefits of Patient Navigation. *Journal of Oncology Navigation & Survivorship*, 9, 10. Retrieved February 3, 2023, from <https://www.jons-online.com/issues/2018/october-2018-vol-9-no-10/1998-the-benefits-of-patient-navigation?fbclid=IwAR3IbNe26H9LOtugJ4UrwzVveTBwJDVdQPAIpIm3-ZxFSKTwO82KbNeVTw>
- [10] Carroll, J. K., Humiston, S. G., Meldrum, S. C., Salamone, C. M., Jean-Pierre, P., Epstein, R. M., & Fiscella, K. (2010). Patients' experiences with navigation for cancer care. *Patient education and counseling*, 80(2), 241–247. <https://doi.org/10.1016/j.pec.2009.10.024>
- [11] Oncology Nursing Society. (2021) Role of the Oncology Nurse Navigator Throughout the Cancer Trajectory Retrieved February 4, 2023, from <https://www.ons.org/make-difference/advocacy-and-policy/position-statements/ONN>
- [12] Budde, H., Williams, G. A., Scarpetti, G., Kroezen, M., & Maier, C. B. (2022, January 1). POLICY BRIEF - What are patient navigators and how can they improve integration of care? - NCBI Bookshelf. Retrieved February 3, 2023, from <https://www.ncbi.nlm.nih.gov/books/NBK577643>
- [13] Ponce, N. (2011). What a Difference a Data Set and Advocacy Make for AAPI Health. *AAPI Nexus Journal: Policy, Practice, and Community*, 9(1–2), 159–162. [https://doi.org/10.36650/nexus9.1-2\\_159-162\\_ponce](https://doi.org/10.36650/nexus9.1-2_159-162_ponce)
- [14] Bafandeh Zendehe, M., Hemmati Maslakhak, M., & Jasemi, M. (2022). Nurses' perceptions of their supportive role for cancer patients: A qualitative study. *Nursing open*, 9(1), 646–654. <https://doi.org/10.1002/nop2.1112>
- [15] Patdu, M. P. D., Liangco, W. L., Ngelangel, C. A., Guerrero, A. M. S., Ala, M. V. G., Rosario, R. M. B., & Marcaida, R. V. (2015). The effect of DOH-PCSI Patient Navigation Access Program for breast cancer on quality of care at the Medical Oncology Clinic at the Philippine General Hospital: The 1st 6 months. *Acta Medica Philippina*, 49(2). <https://doi.org/10.47895/amp.v49i2.958>
- [16] Souza, M. T., Silva, M. D., & Carvalho, R. d (2010). Integrative review: what is it? How to do it?. *Einstein (Sao Paulo, Brazil)*, 8(1), 102–106. <https://doi.org/10.1590/S1679-45082010RW1134>
- [17] Whittemore, R., & Knafl, K. (2005). The integrative review: updated methodology. *Journal of advanced nursing*, 52(5), 546–553. <https://doi.org/10.1111/j.1365-2648.2005.03621.x>
- [18] Sparbel, K. J., & Anderson, M. A. (2000). Integrated literature review of continuity of care: Part 1, conceptual issues. *Journal of nursing scholarship*, 32(1), 17–24. <https://doi.org/10.1111/j.1547-5069.2000.00017.x>
- [19] Hong, Q. N., Pluye, P., Fabregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M. P., Griffiths, F., & Nicolau, B. (2018). Mixed method appraisal tool (MMAT) version 2018 user guide. *Annual Review of Public Health*, 35, 29–45 [http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/attach/127916259/MMAT\\_2018\\_criteria-manual\\_2018-08-01\\_ENG.pdf](http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/attach/127916259/MMAT_2018_criteria-manual_2018-08-01_ENG.pdf)
- [20] Melnyk, B. M., & Fineout-Overholt, E. (2022). Evidence-based practice in nursing & healthcare: A guide to best practice. Lip-pincott Williams & Wilkins.
- [21] Wagner, E., Ludman, E., Bowles, E., Penfold, R., Reid, R., Chubak, C., and McCorkle, R. (2014). Nurse navigators in early cancer care: a randomized, controlled trial. *Journal of Clinical Oncology*, 32(1), 12. <https://doi.org/10.1200/JCO.2013.51.7359>
- [22] Mertz, B. G., Dunn-Henriksen, A. K., Kroman, N., Johansen, C., Andersen, K. G., Andersson, M., ... & Envold Bidstrup, P. (2017). The effects of individually tailored nurse navigation for patients with newly diagnosed breast cancer: a randomized pilot study. *Acta Oncologica*, 56(12), 1682–1689. <https://doi.org/10.1080/0284186X.2017.1358462>
- [23] Swanson, J. and Koch, L. (2009). The Role of the Oncology Nurse Navigator in Distress Management of Adult Inpatients With Cancer: A Retrospective Study. *Oncology Nursing Forum*, 37(1), 69–76. <https://doi.org/10.1188/10.onf.69-76>
- [24] Yackzan, S. (2019). Outcome Measurement: Patient Satisfaction Scores and Contact Oncology Nurse Navigators. *Clinical Journal of Oncology Nursing*, 23(1), 76–81. <https://doi.org/10.1188/19.cjon.76-81>

- [25] Bell, J. G., Secic, M., Shaffer, L. E., Aldrich, E. R., Schott, V. A., Taylor, C., & Elliott, J. O. (2020). Patient Navigation Effect on Cancer Patients' Quality of Life and Distress. *Journal of Oncology Navigation & Survivorship*, 11(10). <https://www.jons-online.com/issues/2020/october-2020-vol-11-no-10/3148-patient-navigation-effect-on-cancer-patients-quality-of-life-and-distress>
- [26] Munoz, R. (2018). Multidisciplinary Cancer Care Model: A Positive Association Between Oncology Nurse Navigation and Improved Outcomes for Patients With Cancer. *Clinical Journal of Oncology Nursing*, 22(5), E141-E145. <https://doi.org/10.1188/18.cjon.e141-e145>
- [27] Stirling, S., Etlund, C., Connelly, C., and Calero, P. (2022). Oncology Nurse Navigator Effect on Emergency Department Visits and Hospital Admissions of Adults With Cancer Post-Outpatient Chemotherapy. *Oncology Nursing Forum*, 49(6), 595–612. <https://doi.org/10.1188/22.onf.595-612>
- [28] Rohsig, V., Silva, P., Teixeira, R., Lorenzini, E., Maestri, R., Saraiva, T. and Souza, A. (2019). Nurse Navigation Program: Outcomes From a Breast Cancer Center in Brazil. *Clinical Journal of Oncology Nursing*, 23(1), E25-E31. <https://doi.org/10.1188/19.cjon.E25-E31>
- [29] Adler, G., Kaufman, G., & Simon-Tuval, T. (2019). Healthcare utilization of breast cancer patients following telephone-based consultations of oncology nurse navigator via telemedical care. *Plos one*, 14(5), e0216365. <https://doi.org/10.1371/journal.pone.0216365>
- [30] Williams, M., Nielsen, D., Dayao, Z., Brown-Glaberman, U. and Tawfik, B. (2022). Patient-Reported Measures of a Breast Cancer Nurse Navigator Program in an Underserved, Rural, and Economically Disadvantaged Patient Population. *Oncology Nursing Forum*, 49(6), 532-539. <https://doi.org/10.1188/22.onf.532-539>
- [31] Lubejko, B. G., Bellfield, S., Kahn, E., Lee, C., Peterson, N., Rose, T., ... & McCorkle, M. (2017). Oncology Nurse Navigation. *Clinical Journal of Oncology Nursing*, 21(1). <https://doi.org/10.1188/17.cjon.43-50>
- [32] Hébert, J., & Fillion, L. (2011B). Gaining a better understanding of the support function of oncology nurse navigators from their own perspective and that of people living with cancer: Part 2. *Canadian Oncology Nursing Journal/Revue canadienne de soins infirmiers en oncologie*, 21(2), 114-121. <https://doi.org/10.5737/1181912x212114121>
- [33] Jeyathevan, G., Lemonde, M., & Brathwaite, A. C. (2017A). The role of oncology nurse navigators in facilitating continuity of care within the diagnostic phase for adult patients with lung cancer. *Canadian oncology nursing journal = Revue canadienne de nursing oncologique*, 27(1), 74–80. <https://doi.org/10.5737/236880762717480>
- [34] Jeyathevan, G., Lemonde, M., & Brathwaite, A. C. (2017B). The role of oncology nurse navigators in enhancing patient empowerment within the diagnostic phase for adult patients with lung cancer. *Canadian oncology nursing journal = Revue canadienne de nursing oncologique*, 27(2), 164–170. <https://doi.org/10.5737/23688076272164170>
- [35] Pedersen, A., Hack, T., McClement, S., and Taylor-Brown, J. (2013). An Exploration of the Patient Navigator Role: Perspectives of Younger Women With Breast Cancer. *Oncology Nursing Forum*, 41(1), 77-88. <http://dx.doi.org/10.1188/14.ONF.77-88>
- [36] Hébert, J., & Fillion, L. (2011A). Gaining a better understanding of the support function of oncology nurse navigators from their own perspective and that of people living with cancer: Part 1. *Canadian Oncology Nursing Journal/Revue canadienne de soins infirmiers en oncologie*, 21(1), 33-38. <https://doi.org/10.5737/1181912x2113338>
- [37] Reed, L., Rua, K. (2020). Defining the Role of the Oncology Nurse Navigator. *Journal of Oncology Navigation and Survivorship*, 11, 3. <https://www.jons-online.com/issues/2020/march-2020-vol-11-no-3/2842-defining-the-role-of-the-oncology-nurse-navigator>
- [38] Elrafei, T., Castaldi, M., Shaker, A., Stanise, T., Gralla, R., Matquez, M., ... & Alexis, K. (2013). Abstract P1-09-11: Can patient navigation help overcome barriers to breast cancer treatment in patients with health care disparities?. *Cancer Research*, 73(24\_Supplement), P1-09. <https://doi.org/10.1158/0008-5472.SABCS13-P1-09-11>
- [39] Jiveden, S. (2022, September 7). How to Become a Nurse Navigator. Retrieved from <https://nurse.org/resources/nurse-navigator/>
- [40] McGuire, S. (2016). *World Cancer Report 2014*. Geneva, Switzerland: World Health Organization, International Agency for Research on Cancer, WHO Press, 2015. *Advances in Nutrition*, 7(2), 418–419. <https://doi.org/10.3945/an.116.012211>
- [41] Kelly, R. (2021, February 23). Defining the Role of the Oncology Nurse and Patient Navigator. *Academy of Oncology Nurse and Patient Navigators*. Retrieved from <https://aonnonline.org/expert-commentary/aonn-blog/3609-defining-the-role-of-the-oncology-nurse-and-patient-navigator>
- [42] Oh, J., & Ahn, S. (2021). Effects of Nurse Navigators During the Transition from Cancer Screening to the First Treatment Phase: A Systematic Review and Meta-analysis. *Asian Nursing Research*. <https://doi.org/10.1016/j.anr.2021.10.001>
- [43] Fischer, S. M., Sauaia, A., & Kutner, J. S. (2007). Patient navigation: A culturally competent strategy to address disparities in palliative care. *Journal of Palliative Medicine*, 10(5), 1023–1028. <https://doi.org/10.1089/jpm.2007.0070>
- [44] Skrutkowski, M., Saucier, A., Eades, M., Swidzinski, M., Ritchie, J., Marchionni, C. and Ladouceur, M. (2008). Impact of a Pivot Nurse in Oncology on Patients With Lung or Breast Cancer: Symptom Distress, Fatigue, Quality of Life, and Use of Healthcare Resources. *Oncology Nursing Forum*, 35(6), 948-954. <https://doi.org/10.1188/08.onf.948-954>
- [45] Gordils-Perez, J., Schneider, S., Gabel, M. and Trotter, K. (2017). Oncology Nurse Navigation: Development and Implementation of a Program at a Comprehensive Cancer Center. *Clinical Journal of Oncology Nursing*, 21(5), 581-588 <https://doi.org/10.1188/17.cjon.581-588>

- 
- [46] Trajano, R. A., Alves, L. L., Almeida, E. P. C. , Decanio, L. C. S., Whitaker, M. C. O., & Amaral, J. B. (2022). Oncology Nurse Navigator Performance in the COVID-19 Pandemic: Challenges and Innovations. *Enferm Foco*, 13(spe1), <https://doi.org/10.21675/2357-707X.2022.v13.e-202227ESP1>
- [47] Valverde, P. A., Kennedy Sheldon, L., Gentry, S., Dwyer, A. J., Saavedra Ferrer, E. L., Wightman, P. D., & National Navigation Roundtable Workforce Development Task Group. (2022). Flexibility, adaptation, and roles of patient navigators in oncology during COVID-19. *Cancer*, 128, 2610-2622. <https://doi.org/10.1002/cncr.33962>