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## Oncology Nurses' Palliative Care Instructional Assessment

Micah Brown McArthur  
*Walden University*

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# Walden University

College of Nursing

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Micah Brown McArthur

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Walden University  
2024  
Abstract

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Oncology Nurses' Palliative Care Instructional Assessment

by

Micah Brown McArthur

MSN, Walden University, 2016

BSN, Georgia State University, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Nursing: Interdisciplinary Health

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February 2025

## Abstract

Palliative care is comfort care measure that compliments care of the chronically ill patient involving the mind, body, and soul and is recognized as part of the solid tumor oncology patient treatment plan. Solid tumor nurses often lack knowledge of palliative care regarding awareness in pain management, disease symptom management, and crucial conversations regarding goals of care which may result in costly, and poor quality healthcare. The purpose of this quantitative, one group pretest/posttest study, guided by the humanistic nursing theory, was to determine (a) what effect a palliative care online module has on the understanding of palliative care options in solid tumor oncology nursing care, and (b) what effect an online palliative care module has on a solid tumor oncology nurse's recognition of palliative care options in solid tumor oncology nursing care. The Palliative Care Quiz for Nurses, a self-directed online module, was completed by 67 solid tumor oncology nurses. Data were analyzed using a dependent samples *t* test, which revealed a statistically significant difference in understanding of palliative care options ( $p < .001$ ) with an effect size of  $d = .486$ , and a statistically significant difference in solid tumor oncology nurses' recognition of palliative care options ( $p < .001$ ) with effect size of  $d = .486$ . Future qualitative and mixed methods studies should be conducted which could provide information for better understanding of what knowledge solid tumor nurses need to understand palliative care. Having more solid tumor nurses with specialized knowledge of palliative care could lead to improved quality of solid tumor oncology patient care and patient outcomes which may affect positive social change.

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## Chapter 1: Introduction to Study

### **Introduction**

Palliative care as an addition to the oncology patient treatment plan is an increasingly important part of treating patients with chronic illnesses. Palliative care is an additional comfort care measure that compliments care of the chronically ill patient involving the mind, body, and soul (Bonebrake et al., 2010). The goal of palliation is the treatment plan is to decrease the difficulty that comes with symptom management needs that develop from any chronic disease, and to attain an improved quality of life throughout the disease continuum (Bonebrake et al., 2010). Most patients provided palliative care have non-cancer diagnoses such as heart failure or respiratory diagnoses, solid tumor oncology patients have been noted to have an underutilization of palliative care referrals (The American Academy of Hospice and Palliative Medicine, 2017). Refusal of additional care opportunities due to misunderstanding benefits of palliation has prevented solid tumor oncology nurses from maximizing the use of enhanced care resources (Carlson, 2014). Bakitas et al. (2015) emphasized the essential need to provide education to oncology nursing staff addressing the underutilization of palliative care for solid tumor oncology patients. Therefore, palliative care therapy as an addition to oncologic treatment plans need more consideration in research and practice.

Early integration of palliative care is important for many chronically ill patients, but especially solid tumor oncology patients. Early referrals for palliative care to solid tumor oncology patients is thought to be a best practice in oncology care, but the process of improving educational awareness for oncology nurses is limited with the current care

delivery models (Hannon et al., 2017). Learning the importance of palliation benefits for solid tumor oncology patients creates an opportunity for solid tumor oncology nurses to ensure they deliver best practices of care that may otherwise be missed.

Treatment plans are also essential. There have been noted disparities in the ordering process for palliative care as an addition to solid tumor oncology patient treatment plan as there is no standardized process (Hannon et al., 2017). According to one study, palliation, as part of treatment, was absent for most solid tumor oncology patients, but early integration improved quality of life, quality of nursing care delivery, and reduced medical costs by providing solid tumor oncology nursing education about the importance of palliation for solid tumor oncology patients (Aldridge et al., 2015). Malloy, et al. (2018) noted that with the addition of palliative care to a patient's treatment plan, increased support was identified for patients and family members. By positively assisting with emotional, physical, and psychosocial needs, nursing staff could offer patients and families support by providing resources during difficult health situations (Malloy et al., 2018). Dangi-Garimella (2016) identified that there was a lack of oncologic palliative care education options or nurse-patient advocacy programs for solid tumor oncology nurses to improve evidence-based care delivery practices. Early addition of palliative care could be beneficial to solid tumor oncology patients' by improving their quality of life, allowing oncology patients to actively participate in care planning, and providing a plan for families during the transitions moving from active care to more comfort-based opportunities (Harden, et al., 2017; Zhi & Smith, 2015).

## **Background**

Palliative care is an additional medical benefit provided to patients diagnosed with chronic illnesses. These illnesses may include cancer and allow for the continuation of curative treatment while ensuring that comfort measures can be provided for solid tumor oncology patients (National Institute on Aging, n.d.). How nurses communicate with and educate oncology patients is an essential component in any attempt to facilitate access to additional medical services, as most patients do not understand the complete meaning of palliation or palliative care (Wittenberg-Lyles, Goldsmith, & Platt, 2014). When healthcare providers are communicating with patients, providers need to be skilled at defining and describing palliative care services and how the addition of palliation can positively impact an oncology patient's treatment plan (Wittenberg-Lyles, et.al., 2014).

Sufficient knowledge of palliative care benefits and early integration of care can have a significant bearing on healthcare costs. Moir et al. (2015) emphasized the need for oncology nurses to have both the knowledge and the skill to effectively educate patients about the concept of what palliative care during active treatment can bring to the comfort of the patient. Finn and Malhotra (2019) found that the earlier a palliative care consultation occurs during a hospital admission, the potential to create a significant cost reduction in the hospital admission by up to 24%, as patients involved with palliation were less likely to utilize intensive care services, decreased return admissions events at the hospital, and understand what the significant benefits of entering hospice care earlier will do for the patient and family throughout the disease process.

Although palliative care and hospice care are similar, there are noted differences in the care provided which causes healthcare providers and patients to have mistaken beliefs that they represent the same type of treatments for chronically ill patients. This misconception increases the likelihood for confusion surrounding the benefit of palliation which amplifies the possibility for patients and family to refuse this additional beneficial care (Carlson, 2014). Hospice is defined as support provided to terminally ill patients that primarily focuses on pain relief and patient symptom management (Hui et al., 2012). Palliative care can be useful for anyone living with a chronic illness, with most individuals having non-oncologic diagnoses such as heart failure, renal disease, or pulmonary conditions (National Hospice and Palliative Care Organization, 2018). Oncology patients have been found to have a significant underutilization of palliative care and palliative care referrals with most palliation for oncology patients occurring only 30-60 days prior to death (National Hospice and Palliative Care Organization, 2018). The American Society of Clinical Oncology (ASCO) confirmed the growing need for oncology patients to receive dedicated palliative care services, that should be advocated for with early initiation into the disease course, while continuing with active treatment regimens if the oncology patient agrees with additional comfort care services being provided (Ferrell, et al, 2017). Again, increased early use, understanding, and implementation plans for palliative care may mitigate many challenges faced by solid tumor oncology patients in treatment.

The comfort provided through palliative care has implications for treatment and recovery. Ferrell et al. (2017) reinforced the concept that palliative care services for

oncology patients can provide beneficial care which improves quality of life and provides the potential to prolong patient survival rates. Wittenberg-Lyles et al. (2014) supported the concept of nurses being educated on comfort measures and palliation services to ensure the priority treatment goals for patients can be effectively communicated. These communications with patients are essential as the solid tumor oncology nurse is a core member of the multidisciplinary team that works with solid tumor oncology patients and their families to ensure all available care options are known, discussed, and decided on for a patient's personalized treatment care plan (Wittenberg-Lyles et al., 2014). Thus, understanding the process and communication is important to treatment and recovery.

Referrals from physicians can be a confusing and uncoordinated process. Carlson (2014) indicated that an influencing factor in preventing physicians from expanding palliation resources for oncology patients may be directly related to a misunderstanding of palliative care by patients, caregivers, or family members by their refusal of care. One way to improve palliative care referrals is to provide education to oncology nursing staff that address missing palliative care treatments for oncology patients (Bakitas et al., 2015). Solid tumor oncology nurses are the frontline care providers who have a significant impact on each patient's oncology care. A solid tumor oncology nurse works with patients who have, or who are at risk of getting somewhere in the human body everywhere except for blood cancers (Cassel & Albrecht, 2018). There are specific oncology nurses for blood cancers such as leukemia or lymphoma. All solid tumor oncology nurses provide physician assessments, administer medications as well as communicate with all patient care providers to help develop an individualized care plan



for each patient's needs (Cassel & Albrecht, 2018). Learning the importance of providing palliative care education appropriately creates an opportunity for nurses to provide improved care that may otherwise be omitted from a patient's treatment care plan.

There is a research gap emphasizing both the lack of education specific to palliation as part of the treatment care plan as well as solid tumor nurses' understanding of what additional benefits palliative care could provide to solid tumor oncology patients. There is a need to add to the research on the effects of additional palliative care service use when solid tumor oncology nurses received education about palliative care (Parajuli & Hupcey, 2021). Research validates the need for more palliative care education to improve a solid tumor oncology nurse's knowledge specific to palliative care nursing (Lundeby, 2022; Parveen et al., 2020). The lack of solid tumor nurses' education or training in palliative care can create a divide between how nurses provide patient-focused care and how it is perceived (Parveen et al., 2020). More research is needed in these areas.

### **Problem Statement**

Best practices in providing care for solid tumor oncology patients should be inclusive of multidisciplinary treatments. Early palliation referrals for oncology patients are thought to be a best practice, but the process of improving education and advocacy for oncology nurses does not exist in current care standards (Hannon et al., 2017). Gaps in palliative care treatment were noted to be an area of concern for solid tumor oncology patients as the numerous identified barriers, such as understanding what palliation can provide and believing that palliation is equivalent to hospice, which existed for the

utilization of all potential treatments (Hannon et al., 2017). Malloy, et al. (2018) noted that the addition of palliative care services to oncology treatment plans increased support to oncology patients by ensuring that treatment requests were communicated to the medical team in a manner that positively impacted patient care delivery and met patient needs.

An expectation in oncology nursing is continuing education opportunities. Al-Kindi, et al. (2014) found that 56% of nursing participants in their study indicated a need for training in more than one area of palliative care. There were many responses from participants specific to training needs including caring for dying patients, improving communication with patients and caregivers, appropriate pain management, and other symptom management methods (Al-Kindi et al., 2014). Nurses that are confident in their capabilities to provide palliative care to oncology patients also feel strongly regarding the need to advocate for patients (Mann, et al., 2019).

There are limited studies that have identified nurses' knowledge around the ability to provide palliative care or comfort care measures when evaluating current literature reviews (Mann et al., 2019). Achora and Labrague (2019) completed a detailed review examining nursing knowledge and opinion about palliative care. Labrague (2019) noted that nurses have optimistic views regarding opportunities to provide comfort care options, even with a lack of knowledge or understanding of palliative care. Nurses want to include opportunities to improve all aspects of a patient's well-being as they face difficulties found in oncology treatment.

Nurses assess both the physical and psychosocial needs of their patients with chronic illnesses. By positively assisting with the emotional, physical, and psychosocial needs, solid tumor oncology nursing staff have the potential to offer patients and families support by providing resources during difficult health situations (Malloy et al., 2018). Dangi-Garimella (2016) identified that there was a lack of palliative care education options for nurses to improve evidence-based care delivery practices. The problem was that there it is unknown what effect palliative care education has on a solid tumor oncology nurse's understanding of palliative care for oncology patients so that nurses who work with oncology patients about palliative care can effectively communicate the benefits to patients.

### **Purpose of the Study**

The purpose of this quantitative, one group pretest/ posttest study was to determine (a) what effect a palliative care online module has on the understanding of palliative care options in solid tumor oncology nursing care, and (b) what effect an online palliative care module has on a solid tumor oncology nurse's recognition of palliative care options in solid tumor oncology nursing care. The independent variable was the palliative care online module, and the dependent variables included the level of solid tumor oncology nurse's understanding and recognition of palliative care options for solid tumor oncology patients.

### **Research Questions**

RQ1: What effect will a brief palliative care online module have on the understanding of palliative care options in solid tumor oncology nursing?

*H<sub>01</sub>*: There will be no difference in the understanding of palliative care options for oncology patients by solid tumor oncology nurses after a palliative care online module.

*H<sub>1</sub>*: There will be a difference in the understanding of palliative care treatments for oncology patients by solid tumor oncology nurses after a palliative care online module.

RQ2: What effect will a brief palliative care online module have on a solid tumor oncology nurse's recognition of palliative care treatments for solid tumor oncology patients?

*H<sub>02</sub>*: There will be no difference in the recognition of understanding among solid tumor oncology nurses of palliative care treatments for oncology patients after a palliative care online module.

*H<sub>2</sub>*: There will be a difference in the recognition of understanding among solid tumor oncology nurses of palliative care treatments for oncology patients after a palliative care online module.

I measured the dependent variable of solid tumor nurse's understanding (for RQ 1) and recognition of palliative care treatments (for RQ 2) using the Palliative Care Quiz for Nurses (PCQN; Ross, et al., 1996). Ross et al. (1996) noted that the PCQN provided effective measurements of both nursing knowledge and nursing understanding of what the utilization of palliative care means for nursing practice.

The PCQN tool was constructed to evaluate what palliative care knowledge means for patient care. Ross et al. (1996) used the Canadian Palliative Care Curriculum as a theoretical foundation to develop the PCQN questionnaire. An advisory board

comprised of medical specialists assessed the questions for validity and relevance to solid tumor nursing clinical practice (Ross et al., 1996). The overall pass rate of 61% was the average for the nursing students ( $n = 200$ ) and registered nurses ( $n = 196$ ) in the group designated as the sample population utilized for assessing the PCQN tool validity (Ross et al., 1996).

### **Theoretical Framework**

The theoretical framework that I utilized in this research study was Paterson and Zderad's humanistic nursing theory (HNT; Patterson & Zderad, 1976). Collins and Small (2019) identified that the HNT showed traits that enabled oncology nurses to understand each patient's individualized needs and experiences to aid in knowing what care treatments should be advocated for if missing from a current treatment care plan. This theory was a good fit for my RQs and approach.

Comfort is a key aspect of palliative care, but it is also a primary concept of HNT. Wu and Volker (2012) emphasized that the inter-subjective transactions, part of the HNT, occurring between the nurse and patient during the period when medical treatment is provided is shown by respect in the medical relationship allowing the nurse opportunities to promote comfort which has a final goal of improving quality patient care. An association between providing palliative care and the HNT is beneficial as there is an appreciation of human life by understanding a chronic disease process and being able to preserve patient autonomy and decision-making abilities in their treatment planning processes (Wu & Volker, 2012). With the HNT, solid tumor oncology nurses focus on a solid tumor oncology patient's current health status and work to understand the patient's

history, life experience, and psychosocial needs (Jo & An, 2015). Palliative care adds value to the HNT as the goal is to treat the patient for the needs of the human being, and not necessarily focus all treatment energy on curative intent (Jo & An, 2015). The care nurses provide focuses on the patient as a whole and not just part of the individual.

In the HNT, nursing is the calming response given to one person from another during a time of need. This calming response creates an intentional care relationship because it has the goal of providing patients with comfort measures (Patterson & Zderad, 1976). Therefore, the perspectives noted by the HNT are relevant to solid tumor oncology patient care and the incorporation of palliation in nursing. More details on the HNT will be presented in Chapter 2.

### **Nature of Study**

The nature of my quantitative study was a one group. pretest and posttest study designed to determine the effectiveness of an online module in improving solid tumor oncology nurses' understanding and recognition of palliative care treatments for solid tumor oncology patients. The Wilcoxon Signed Rank test is the statistical test I used to evaluate data from my research study. The Wilcoxon Signed Rank test assesses significant changes for each item in the pretest and posttest to determine if the online module intervention of the study was effective (Rosner, et al., 2006). I used G\*Power software for analysis, a pretest/ posttest, one-group design with a medium effect of .5, alpha of .05, and .8 power to yield a needed sample size of 35 participants (Faul et al., 2007). I used the PCQN (Appendix C) as the pretest and posttest to evaluate impact and effectiveness of the online module (Ross, et al.,1996).

Using the PCQN as my pretest and posttest tool ensured that the many facets of palliative care are addressed. The PCQN contains questions about palliative care, comfort measures, and palliative treatment that can be used for solid tumor oncology patients and questions regarding palliative treatment decisions (Ross et al., 1996). The PCQN allows for a quantifiable measurement of palliative care knowledge for nurses, develops an awareness to the concept of palliative care, and aids in defining the primary areas of focus for palliative care education (Ross et al., 1996). The online module contains palliative care information, the difference between palliative and hospice care, and the importance of palliation utilization in oncology patient care plans. This online module was developed by The Center to Advance Palliative Care (CAPC) with permission to utilize this tool found in Appendix D. Using the same pretest and posttest maintained an ability to quantify the educational intervention in a standardized method.

### **Definition of Terms**

When studying the concept of palliative care, specifically for solid tumor oncology patients, there are terms that should be defined to ensure the concept and need for education is understood clearly by nurses. Below are seven of the significant words and phrases that will be defined to provide conceptual understanding of this research:

*Advanced care planning*: a process that allows patients to plan their future health care wishes (Fliedner et al., 2021). Advance care plans for patients with chronic or terminal diseases provide guidance to ensure that nurses and physicians can care for a patient when the patient is no longer about to make or communicate their selected healthcare choices (Fliedner et al., 2021).

*Comfort*: a relief from discomfort and its meaning is synonymous with the phrase “comfort measures” as it implies a cause of comfort (Kolcaba, 1991). comfort measures are defined as actions initiated in response to specific patient comfort needs and if the measure can be determined to be successful, the need is met, and the outcome is comfort (Kolcaba, 1991).

*Family care meetings*: a tool to allow oncology and palliative care collaboration and the oncology nurse should be an active participant as the patient’s nurse and care team can provide information that can balance optimism with realism while promoting care that can be both patient- and caregiver-centric over the patient care journey (Glajchen & Goehring, 2017).

*Hospice*: support provided to terminally ill patients that primarily focuses on pain relief and patient symptom management (Hui et al., 2012). A primary goal that is set when converting from palliation and initiating hospice care is to provide relief from pain and any other possible distressing symptoms that a patient may face at the end of life (Hui et al., 2012).

*Nurse competency*: the capacity of a nurse to act by connecting the knowledge and experience skilled acquired as a nurse over time (Fukada, 2018). Provided explanation that competency on reflecting the nurse's thoughts and judgment when providing patient care (Fukada, 2018).

*Oncology*: a medical specialty that focuses on the diagnosis and treatment of cancer while *oncology patients* are individuals diagnosed with cancer (National Cancer Institute, 2020a).



*Palliative care:* defined by the Institute of Medicine (IOM) in 2003 as total care of the patient entailing the body, mind, and spirit (Bonebrake, Cluver, Call, & Ward-Smith, 2010). The goal of palliation as part of the treatment plan is to decrease the difficulty that comes with pain and other symptoms that develop from a chronic disease, and to provide a comfortable quality of life over the course of a chronic healthcare condition. (Bonebrake, Cluver, Call, & Ward-Smith, 2010).

*Palliative care treatments:* defined as treatments that focus on an individual patient's specific needs which include physical needs such as pain control, emotional and coping mechanisms for depression, anxiety, or fear, spiritual treatments that allow patients and family members to explore beliefs and values to get to a place of acceptance with the diagnosis, and practical needs from financial and legal assistance to including caregivers in crucial conversations to ensure a patient's requests are recognized during all phases of a terminal diagnosis (National Cancer Institute, 2020b).

*Solid tumor oncology nurses:* nurses who care for patients that can have cancer occur in a part of the body, such as colon, lung, or liver (American Cancer Society, 2022). There are oncology nurses that only care for patients with blood cancers. Oncology nurses are separated into these two categories as even with the similarity of being an oncology nurse, treatment plans and modalities vary greatly between blood tumors and solid tumors (American Cancer Society, 2022).

*Supportive care and symptom management:* often utilized interchangeably to mean learning to manage symptoms and side effects for oncology patients (Brown, et al., 2019). The primary goal for any possible supportive care measures or symptom management

treatments is to give relief to chronically ill or terminal patients from pain and discomfort (Brown, et al., 2019).

### **Assumptions**

In this study, I made several assumptions. Assumptions existed within this research that solid tumor oncology nurses will answer the pretest and posttest with truthful, honest, and non-biased answers. An assurance that information provided to me during the data collection process is confidential to raise the expectation for truthfulness in their responses though unable to be anonymous. Other assumptions included the idea that solid tumor oncology nurses desired more understanding and recognition regarding palliative care and that data could be impacted due to the participants having similarities in training or previous patient care delivery as all were solid tumor oncology nurses.

### **Scope and Delimitations**

I included parameters to define the scope of the study. The scope of my study included providing an online module to oncology nurses that care for adult patients. Pediatric oncology nurses and hematologic oncology nurses were excluded from the participant pool. Care delivery for pediatric patients and hematologic oncology nurses often follow different algorithms or plans of care for these patients in specific settings for providing best practice care.

Solid tumor oncology nurses were included in the participant pool. Also, I collected the length of time as a solid tumor oncology nurse, but there were no exclusions based on any specific length of time as an oncology nurse. For this study, solid tumor oncology nurses can be defined as nurses that work with adult oncology patients with any

solid tumor oncology diagnosis. These solid tumor oncology nurses include inpatient and acute care solid tumor oncology nurses that worked in hospitals, as oncology nurse navigators, infusion center nurses that participate in providing chemotherapy or biotherapy treatment, or oncology nurses that work in a solid tumor oncology physician's practice. As this list cannot be entirely inclusive, other possible solid tumor oncology nursing professions will be taken into consideration for study participation.

This was a quantitative research study to evaluate the success of an online module intervention for solid tumor oncology nurses by utilizing the PCQN as both the pretest and posttest for consistency to determine if there was a difference in a nurse's concept of understanding and recognition of palliation or palliative care treatments for any patient with a solid tumor oncology diagnosis. A specific delimitation for this research study was the utilization of qualitative research. The following populations have been excluded from this study, these included non-solid tumor oncology nurses and oncology nurses that are no longer in direct patient care roles. The target population was limited to solid tumor oncology nurses that focused on the care opportunities for oncology patients.

My study focused on the use of the PCQN as a pretest and posttest without open-ended questions. Data reviewed were based upon the pre-intervention responses and post-intervention responses after taking the online module. By obtaining permission for use of the PCQN and the online module for oncology nurses specific to palliative care, the goal will be for the pretest to be taken, immediately review the online module, and then take a posttest for final results after the online module is completed.

The HNT is the primary theory to guide my research. Other nursing theories or models considered for foundational guidance are Kolcaba's theory of comfort (Liu et al., 2023) and the health belief model by Hochbaum and Rosenstock (Jones et al., 2016). Kolcaba's comfort theory is thought of as a middle range nursing theory that defines the concept of comfort as being strengthened enough to ensure the needs for relief, ease, and transcendence can be achieved through health seeking behaviors (Kolcaba & Kolcaba, 1991). Comfort can be a goal that exists in treatment care planning, so nurses are able to provide palliative treatments for relief to patients with chronic or terminal diseases like cancer. Schroeder and Lorenz (2018) found that a palliative care nurse's mindset was not specifically focused on task-oriented cares such as specific tasks like vital signs or care interventions, but has a mindset that will develop comfort, symptom management, and support for patients with chronic illnesses.

Knowing the key concepts of the health belief model (HBM) provides the necessary background for why this theory was the basis of my research. The HBM was originally developed in the late 1950's by the social scientists that worked for the United States Public Health Service (Rosenstock, 1974). The HBM is a nursing theory primarily focused and developed based on the behavioral social sciences for its foundation and is frequently used throughout nursing practice when advocating positive health behaviors (LaMorte, 2019). Shahnazi et al. (2012) defined the HBM as a nursing model based on both social and psychological ideations that try to explain and assess the health behaviors of individuals by focusing on their attitudes and beliefs held prior regarding the

healthcare interactions. The HBM aids nurses in understanding the health beliefs of patients to gain insight on how patients engage in the decision-making process.

Understanding how patients think about their chronic illness shows nurses what they perceive to impact their quality of life and determine what therapies will be best for their situation. The HBM was created as a model to specifically focus on health promotion activities that encourage the utilization of health-screening or preventive care services (LaMorte, 2019). This model aligns with the characteristics of supportive palliation, while valuing the relationship that develops between solid tumor oncology nurses and oncology patients by understanding each patients needs and what individualized foundation of palliative care would be most appropriate for improving quality care (Akoo et al., 2022). Akoo et al. (2022) emphasized that the HBM explains how palliation services can be thought of as pain management treatments that proactively prevent pain issues or invite compassionate communications between patients with oncologic diagnoses and their support systems. Nurses are often tasked with providing health education to patients, ensuring that chronically ill patients need to understand how to integrate comfort treatment options into any treatment care plans (Akoo & McMillian, 2022). Continuing education for solid tumor oncology nurses ensures that opportunities for all treatment options are considered in treatment planning.

### **Limitations**

There are several limitations to this study. The limitations in a study are challenges that are found when working on the final design or methodology of a study and paying attention to how they can affect data interpretation. There are factors that I

needed to consider regarding my one-group pretest/posttest design since this is a nonrandom participant group, there is no control group for comparison, and I can infer that the outcome to the educational intervention is a causal relationship from the comparison of the pretest to posttest after the online module intervention specific to the understanding and recognition of solid tumor oncology nurses to improve care for the solid tumor oncology patient population.

A primary limitation with data collection was the recruitment of participants so that I recruited a large enough sample size to meet a power of .08. I posted my recruitment flyer to social media sites and professional nursing associations websites which increased my access to solid tumor oncology nurses. The sample size needed of 35 participants was determined with the use of the G\*Power software (Faul, et al., 2007). For my study, I had a total of 67 participants. The population of participants has been broadened to include all solid tumor oncology nurses that work with adult oncology patients diagnosed with a solid tumor.

Increasing inclusionary criteria can allow for a larger population of participants to volunteer to contribute to the research. The timeliness of the pretest will be taken immediately prior to the online module intervention with the posttest taken after the online module is completed. McRobert et al. (2018) found that the use of social media or internet recruitment can potentially lead to development of limitations consistent with lower rates of response and for participant bias. Another limitation that existed with this research may include the self-selection of nurses as participants that have an interest in palliation uses for oncology patients. Also, the use of self-reported tools is an easier way

to collect data, but a disadvantage or limitation that related to this study would be recall bias or response-choice order impact if nothing changes within the measurement tool as the pretest and posttest (Kesbakhi, et al., 2017).

There was a need to consider further limitations for this project that may have occurred due to the extent of the novel and ongoing coronavirus pandemic. There have been noted changes on professional nursing websites about the focus of research that is endorsed. There may be the need to understand that data could be skewed from use of what is projected to be a convenience sample for research data.

### **Significance of the Study**

Skills for oncology nurses are gained over time and the experience of caring for oncology patients as well as their families and caregivers is crucial for patient care delivery. The goal of this study was to bring awareness to a solid tumor oncology nurse's need to have consistent opportunities that will allow for the development of skills needed to increase awareness of treatment options in palliative care nursing in the oncology setting (Mann et al., 2019). Results of my study helped to provide information to fill a gap by providing an online module to solid tumor oncology nurses regarding the importance of giving patients options to start palliative care in early-stage disease, or terminal disease diagnoses. Research was needed to identify current inconsistencies in palliative care education and establish what evidence-based interventions can be used to address discrepancies in the lack of palliation options given in cancer care (Dangi-Garimella, 2016). Previous studies identified gaps in providing palliative care treatment for oncology patients. Parveen et. al (2020) found that even as education improves, there

are still a significant number of nurses that acknowledge that they have a poor comprehension of the concept of palliative care. Nurses did have a positive experience as they were learning about palliative care, but acknowledged the implementation is often difficult as they provided insight into this important aspect of ensuring comfort and providing quality healthcare.

The literature revealed that palliation is absent for most oncology patients, but early integration of palliation improves quality of life, quality of nursing care delivery, and reduces overall healthcare costs (Aldridge et al., 2015). Malloy, et al. (2018) noted that the addition of palliative care to a patient's treatment plan increases the ability of the staff to provide patients and families with needed resources and support, and positively impact emotional, physical, and psychosocial needs. Dangi-Garimella (2016) identified a lack of palliative care education options for nurses when focusing on evidence-based care delivery practices. My study affected positive social change by improving awareness of the need for continued education or annual competencies of solid tumor oncology nurses regarding care delivery by empowering solid tumor oncology nurses to advocate for the addition of palliation to an oncology patient's treatment or care options.

### **Summary**

Palliative care is an important aspect of a treatment care plan for oncology patients over the disease continuum (Zhi & Smith, 2015). The idea of early integration of palliative care aids healthcare providers in advocating for benefits in improving patient symptoms and pain, increasing patient quality of life, aiding in advance directive planning, and a noted decrease in healthcare costs (Hannon et al, 2017). Newer evidence



also suggests it can prolong life as well as improving the quality of life that patients have remaining with time (Almutairi et al., 2023). Positive outcomes occur with the inclusion of palliative care into a solid tumor oncology patient's treatment plan, but there are still significant underuses and challenges that prevent healthcare providers from delivering the best care opportunities (Ferrell et al., 2017).

Evidence has shown that the addition of palliative care early in the cancer treatment plan can improve cancer care and overall outcomes for patients specifically for pain management, control of disease symptoms, psychological relief, patient, and family satisfaction while showing the potential to lengthen overall survival rates in late-stage cancers (Schulman-Green, et al., 2018). Many different models of early integration of palliative care into healthcare settings have been studied and all show the benefits of offering palliative care services whenever there is a positive cancer diagnosis (Bakitas, 2015). There is still hesitation to add palliation to the care plans of early-stage cancer patients even with the positive evidence noted from peer-reviewed research showing quality of life improvement, more open family relationships, increased patient satisfaction, and providing an ability to ensure a patient can aid in decisions that may be difficult for family at an advanced stage of disease (Bakitas, 2015). To overcome barriers to palliative care, research is still needed to determine what inclusionary criteria are needed for standardization of best practices (Hawley, 2017). To utilize palliative care services for oncology patients appropriately, a process should involve a multi-disciplinary inclusive of primary care providers, medical oncologists, solid tumor

registered nurses, nutritionists, and other specialties in healthcare to develop robust and effective treatment care plans (Hawley, 2017).

When reviewing the literature, opportunity exists to improve nursing competencies specific to the use of palliation and palliative care services for oncology patients. Hao et. al. (2021) emphasized the need to implement palliative care education for solid tumor oncology nurses during educational training and as a continued professional competency to ensure that palliative care utilization will be considered a best practice for cancer care treatment.

In Chapter 2, I present a comprehensive review of literature in the research preparation phase that is considered significant in the importance of providing palliative care nursing education so that best practices can be used when caring for chronically or terminally ill patients, such as oncology patients. I also present my literature search strategy and a detailed description of the HNT.

## Chapter 2: Literature Review

### **Introduction**

A fundamental question being asked within this study is whether there can be a change in the comprehension level of a nurse specific to the concept of palliative care for oncology patients with a pre-educational intervention evaluation, educational materials, and then a post-intervention evaluation. This literature review validates how this study can advance the need for more educational opportunities to be provided to oncology nurses. The literature additionally validates the need to include palliative care options as a component of oncology nurse competencies as they are often charged with assisting in education of oncology patients as they are in the process of determining treatment options and care planning.

Knowledge of previous studies offers references for comparison that aid in the evaluation of what the contribution of my study can add to this subject and how can it help to advance the academic knowledge base of palliation for oncology patients. This literature review will attempt to correlate my study to current literature to better define benefits for future research based on the concept of nursing processes and competency opportunities for any oncology nurse. Nursing care provided to oncology patients ensures that all supportive services are discussed or evaluated to determine which services benefit each specific solid tumor oncology patient.

There are many factors for patients to consider when facing a chronic illness diagnosis. Caring for patients with a terminal diagnosis or chronic condition frequently involves the use of many aspects of palliation services to prevent, lessen, and treat any

physical pain and suffering a patient may experience (Zolot, 2016). Nurses have significant multifunctional roles when responsible for caring for any seriously ill patient, so it is important for nurses to have a sufficient understanding of how palliation can be appropriately utilized to improve patient treatment care plans and comfort measure for the patient (Zolot, 2016). Although the literature expresses that palliative care should be added to both early stage and late-stage cancer patients, the palliation referrals to services are often added too late in an individual's care plans to make any significant positive change in how the patient or their family feels with the situation they are going through together (Wadhwa et al., 2018). As nurses obtain more knowledge surrounding the benefits of palliative care, they can provide solid tumor oncology patients with information that allows them to make informed decisions about their treatment planning.

Having opportunities to include palliation can be beneficial to solid tumor oncology patients. Wadhwa et al. (2018) concluded that the earlier palliative care can be part of an oncology patient's treatment plan, there is a correlation that the patient will have time for treatments that can and will improve the management of symptoms while providing comfort measures during this time. Zolot (2016) emphasized that late access to palliative care confirmed through documentation proves that there are less opportunities for additional comfort measures as a patient's disease progresses. Agarwal and Epstein (2017) found that along with helping to relieve symptoms, palliative care education can provide support to patients as they cope with the disease process to set realistic treatment goals with their healthcare team, but Vanbutsele et al. (2020) emphasized that poor understanding of the goals of treatment can impact the ability of a solid tumor oncology

patient to make informed decisions. Multidisciplinary treatment planning that includes patient contributions influence the care plan to also include palliative comfort measures across the continuum.

The goal of this literature review is to summarize the existing research and literature relevant to palliative care education provided to oncology nurses. Another goal is to cover significant barriers or improvements that could improve oncology nursing knowledge. Although palliative care has been utilized for a variety of conditions, there is evidence-based literature that shows a strong focus for the application of palliation with the oncology patient population (Vanbutsele et al., 2020). Palliative care can add beneficial treatments to the solid tumor oncology patient care management.

Educating oncology nurses to recognize how important palliative care can be for oncology patient's mental and physical well-being will help to ensure resources are allocated appropriately. This allocation may contribute to the knowledge base and eliminate gaps that may exist in care coordination as nurses deliver both physical care and psychosocial care to patients throughout active treatments and beyond (Harden, et al., 2017; Ferrell et al., 2017, Hao, et al., 2021). Oncology nurses are positioned to educate and advocate for patients while aiding in addressing many ethical and legal aspects of care for patients and caregivers (Harden et al., 2017). Oncology nurses can also review charts to see if patients have access to palliative care options throughout the disease progress across the continuum that transitions patients from more specific curative treatments to palliative treatments, and finally to end-of-life comfort measures (Harden et

al., 2017). Solid tumor oncology nurses are positioned to be strong advocates ensuring patients are engaged in the decision-making process to determine appropriate care.

Also, included in this chapter is literature that specifically discusses how nurses have the potential to overcome barriers and advocate for education specifically related to providing palliative care information to oncology patients. One key aspect is to allow access to all choices that exist. In doing so, patients can participate as a member of their care team, deciding what treatments they are willing to accept as part of their oncology treatment plan. Goals that have been developed for this study include utilization of the Humanistic Theory as the theoretical framework platform for this research, review of current nursing education competencies or best practices specific for oncology nursing knowledge of palliative care, and understanding how exposing oncology nurses to an online module as the intervention on palliation has the possibility to impact the need to understand the importance of palliative care options for oncology patients that have the possibility to improve quality of life for patients, their caregivers, or others involved in caring for patients through the terminal phase of a disease process.

### **Literature Research Strategy**

A literature search was completed utilizing multiple databases including PubMed, the Cochrane Database of Systematic Reviews, Thoreau Multi-Database search, MEDLINE with or without full text, and CINAHL with or without full text. The strategy behind the initial literature search ensured that there were no limitations for only full text literature or date of publication, but limitations were placed to verify that the literature searches would be in English only and information would come from peer-reviewed,

scholarly journals. The primary years of the literature review included 2013 to 2022. There are seminal literature studies, such as the study on the development and validation of the Palliative Care Quiz for Nurses (PCQN) (Ross et al.,1996).

The keywords used in the literature search for this research included *advanced care planning, education assessment tool validation, hospice and palliation, palliative care, oncology nursing education, oncology palliation, nurse competency, palliation, palliation referrals, nursing and palliation, comfort care, comfort measures, oncology comfort care, effective communications with patients, nursing communications, and understanding needs of the oncology patient.*

These keywords helped me uncover specific areas of research that were also included. Along with the primary key words used for the literature search, several different themes that were commonly found throughout the literature related to the importance of palliative care treatments for the oncology patient population and lack of oncology nursing awareness of palliative care were reviewed. The different areas of focus noted in this literature review include the history of palliative care use and the importance of use with oncology patients, the theoretical framework used to guide my research, a baseline idea of what the current knowledge levels exist specific to the concept of palliative care by oncology nurses, do oncology nurses understand the importance of including palliative care treatment options to an oncology patient's care plan, why palliative care education is essential to be available for oncology nurses, palliative care knowledge tests that assist in understand a nurse's understanding of the concept of palliation, and other important aspects of this research that assist with ensuring validity of

this research by aiding in defining the gap that continues to exist in oncology palliation research and literature.

The use of key words and phrases allows for the development of inclusionary and exclusionary criteria when looking for peer-reviewed research. Some examples of these key phrases include advanced care planning and palliative care education designed for nursing. An example of exclusion criteria for this research would be palliative care studies not specific to solid tumor oncology patients or any study specific to pediatric patients. Inclusion criteria would be related to symptom management for patients that are on a specific type of chemotherapy or patients that have had a specific surgical procedure.

### **Theoretical Framework**

In this study, I used HNT for my theoretical framework. The HNT was developed by public and mental health nurses Paterson and Zderad in 1976 (Santos et al., 2007). Paterson and Zderad (1976) believed that the way to educate nurses needed to have an underlying foundation from experience, from a nurse's ability to relate to patients, and to aid with health promotion for both medical and emotional needs. A humanistic model for oncology nursing assesses the entire patient rather than just the specific illness (Santos, et al., 2007). The use of a humanistic approach assists in providing care for mental health, emotional health, and physical health (Santos et al., 2007). It is appropriate to consider the HNT as a framework for palliative care education as both theory and concepts are inclusive of patient experiences such as relationships, communications, lived experiences, and understanding suffering (Pereira, et al., 2018). Nurses ensure that patients are



provided with the information needed to make an informed decision regarding treatments for complex disease processes.

Education and training for nurses can be provided in an educational institution or as job experience. Solid tumor oncology nurses with training in palliation can be an important asset in educational disease management, psychosocial assistance, symptom support, and spiritual needs (Kamal et al., 2020; Swami & Case, 2018). The HNT supports the relationship that exists between a patient's needs for palliative care treatments and a patient's oncology diagnosis. The HNT promotes the caring and holistic ideas of the relationship between solid tumor oncology nurses and the patients they care for independent of the setting where care is provided (Wu & Volker, 2011). The act of "nursing" is regarded as a calming response given from one person to another when there is a moment of need (Patterson & Zderad, 1976). The HNT has a primary focus specific to nursing and the development of patient well-being during treatment (Patterson & Zderad, 1976). The Palliative Care Model provides understanding of two important aspects for care guided by the Humanistic Nursing theory, the holistic approach to care and a need for multidisciplinary professional practice access for oncology patients at any stage of their disease (Santos et al., 2007). Education is beneficial to solid tumor oncology nurses as they care for patients at the bedside and have awareness of the needs of each individual patient.

The patient and their well-being are the focus of the nursing process. The HNT provides a foundation for oncology nurses to not only focus on the oncology patients' well-being, but also on the life outside of a patient's disease process (Patterson & Zderad,

1976). Focusing on the well-being of patients with a terminal or chronic disease process can provide support at critical moments during their health care journey and at key points in their lives (Santos et al., 2007). Although the person's individuality is respected as part of the HNT, there are still relationships with others involved with the patient to consider (Patterson & Zderad, 1976). Nurses work to ensure all care team members, patients, and their families understand the needs of the patient both from a physical and psychosocial standpoint.

Each patient has different treatment needs when facing a chronic illness. Wolf and Bailey (2013) noted that the relationship process focused on in the HNT encourages nurses to get to know each patient as an individual to understand their independence, their personal histories and life experiences, while accepting the way each patient lives. Patterson and Zderad (1976) initially defined specific processes employed in the development and outcomes of utilization of the HNT. The HNT creates a solid foundation between a nursing theory that aids in care planning and guidelines while understanding that this information for treatment considerations creates an impact on patient care delivery (Patterson & Zderad, 1976). A nurse's perception of the world of each patient should focus on a primary goal of delivering care to help the patient achieve relationships that are beneficial to both the treatment care team and the mental status of the patient (Wolf & Bailey, 2013). Nurses are front-line advocates for patients and their relationships with their healthcare providers.

## **Humanistic Nursing Theory and Palliative Care**

There is an association between the HNT and palliative care delivery. The HNT aids to explain how comfort care is beneficial to a solid tumor oncology patient as the value of a patient is respected in the health-disease process by ensuring patient autonomy and decision-making abilities during treatment planning (Wu & Volker, 2012). With the HNT, nurses focus on current health status and attempt to understand patients histories, life experiences, and psychosocial needs (Jo & An, 2015). Palliative care can add value to a solid tumor oncology patient's treatment plan as the goal is to treat the patient for the needs of the human being, and not specifically focusing all treatment energy only on a cure (Jo & An, 2015). Nurses shift their focus to a more holistic approach.

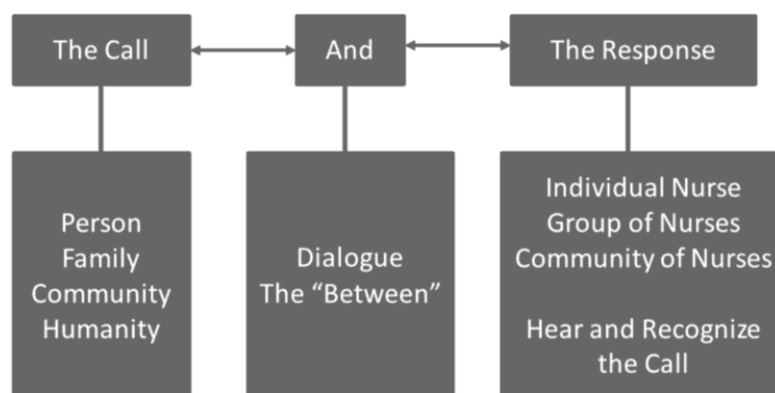
While solid tumor oncology patients face fear and uncertainty during cancer treatments, nurses develop relationships with patients that can provide emotional support. Nursing practice provides a reassuring response from one person to another during a time of need (Patterson & Zderad, 1976). This nurse-patient relationship is intentional because it has the goal of providing patients with comfort measures (Wu & Volker, 2012). Wolf and Nagle (2013) emphasized that the HNT is considered one of the caring theories developed by nursing because there is significant emphasis on the patient-centered care or patient-centered perspectives involved with this theory. Using the concept, the idea of 'being with and doing with,' oncology nurses work with patients to achieve their final goals while using palliation to provide comfort during difficult times during any care delivery process (Wu & Volker, 2012). Care for oncology patients often includes more

than just curative therapies, there are emotional and physical comfort measures nurses provide for their patients.

A core element in the relationship between a nurse and their patient is the idea of caring. Caring is an integral concept of humanism and can be explained as the ability to express empathy for others and the situations that they may be going through at a specific point in time (McCaffery, 2019). Oncology nursing is a nurturing activity to help people in need of assistance and care who are dealing with a chronic and potentially life-threatening disease. A nurse's awareness of patient needs as well as how a nurse can give patients the chance to oversee their own decisions is key to applying the humanistic theory to oncology patients with a chronic or terminal disease by offering palliative care treatments (Figure 1). Oncology nurses that care for solid tumor oncology patients ensure they experience as much comfort and dignity as possible during their treatment journey.

**Figure 1**

*Humanistic Nursing Theory "Call and Response"*



## **History of the Use of Palliative Care in Oncology**

The addition of comfort measures to treatment plans for oncology patients provides a more comprehensive approach to patient care. The palliative care model was created from a movement originated by Saunders when the idea of adding comfort measures to care plans should be part of the care continuum process started (Sanders & Baines, 1983). Saunders and Baines (1983) presented an idea of "total pain," which includes many different causes of pain, such as physical, emotional, social, or spiritual pain, and how to address each type for terminally or chronically ill patients. Total pain was accepted for the basis of this model, that every individual will have their own beliefs, perceptions, and individual plans for determining what specific treatments they would want to be utilized as part of their individualized treatment plan for pain management (International Association for Hospice and Palliative Care [IAHPC], 2018). Comfort care measures can have an impact on the pain that a chronically ill patient may have.

Nursing and palliative care are interconnected, as nurses play a central role in providing compassionate, holistic care for individuals facing chronic illness challenges. Palliation is defined as any type of treatment that provides the standard of comfort care or support for any patient's pain control with the understanding that this palliation treatment is not seen as a curative option for any patient with a chronic or terminal disease (IAHPC, 2018; Sanders & Baines, 1983). The IAHPC (2018) defined palliative care as a clinical specialty that focuses on improvements in the quality of life for those with any terminal or chronic illness. The IAHPC concluded that treatments focused on palliative care concepts allow for patients to have a higher probability of achieving a more consistent

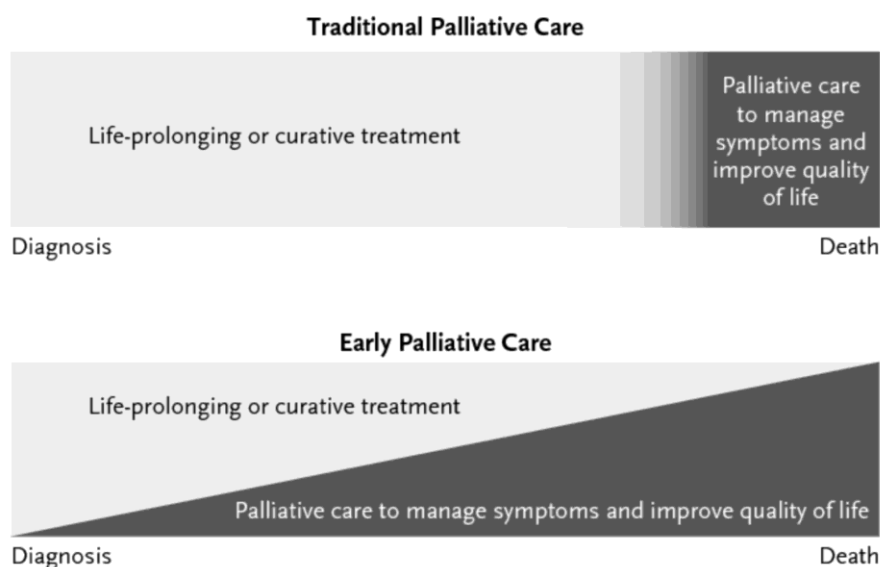
process with symptom management, improved comfort or pain control, and ensures that patients are given the opportunity to improve their care journey by enhancing the remaining quality of life as needs change from a primary focus of curative treatment to a focus on treatments that can keep patients comfortable (IAHPC, 2018; Santos et al., 2007). The goal of palliative care is to improve the overall quality of life, helping patients and families navigate the challenges of chronic illness while maintaining dignity and comfort.

By advocating for patient comfort and dignity, nurses ensure that care is patient-centered, respectful of individual preferences, and aimed at enhancing overall well-being for both the patient and their loved ones. Palliative care treatment plans when ordered by oncology physicians are found to assist solid tumor oncology nurses observe and manage the physical and psychosocial needs of a chronically ill patient (Johansen, et al., 2018; Parajuli, et al., 2021). A significant goal of solid tumor oncology nurses is to help educate patients about the psychological factors that can occur with disease progression, while moving from curative care to comfort care measures (Moir, 2015). When palliative care is started at the same time as curative treatment, the focus of supportive care during the disease continuum, using the treatments provided by palliative care correctly often correlate with ensuring a multidisciplinary approach being offered to patient regarding whatever options are needed to provide comfort measures for controlling pain and suffering those patients may experience as there is disease progression (Hui et al., 2018; Moir, 2015). In contrast to what hospice care can deliver to a patient, palliative care offers comfort measures that can be initiated for a patient at any time in the care

continuum of their illness and it not only offered in the terminal phases of a disease state (Hui et al., 2018; Figure 2). The primary goal of palliative care is to improve the quality of life for both patients and their families.

## Figure 2

### *Traditional vs. Early Palliative Care*



The HNT focuses on the importance of empathy, compassion, and understanding when providing effective care. Wolf and Nagel (2013) explained that the core foundation of the HNT reinforces important considerations in a nurse-patient relationship and emphasizes the true role of the relationship. The HNT can guide research to test the important concepts of dignity and respect for both nurses and patients while emphasizing that there is a significance of this relationship when a patient is facing a chronic or terminal illness (Wolf & Nagel, 2013). Oncology nurses can advocate for oncology patients that they care for from diagnosis, through active treatment, and then during the eventual progression or transition from curative care to comfort care measures while

being sure they can provide comfort whenever possible (Hannon et al., 2017; Schroeder & Lorenz, 2018). Development of human connections and caring for patients are essential aspects of the nursing profession in providing complex oncology care.

Some patients with more complex needs require more extensive reviews from palliative care treatment teams, these reviews provide further recommendations that can be delivered by trained palliative care specialists (Hui et al., 2018). Research has shown that a high number of palliative care specialists are often involved in consultations specific for oncology patients, but primarily the oncology patients have advanced cancer diagnoses (Hui et al., 2018).

Nursing is one of the healthcare disciplines that help patients connect to all their needed resources. There is an understanding that a significance need exists to connect each oncology patient with the correct ancillary services referrals (Ferrell et al., 2017; Hui et al., 2018). The use of palliative care treatment teams aid in the monitoring of each patient throughout the care continuum and being prepared to assist patients when there will be expected transitions in treatment that increase the likelihood of side effects or changes, all while continuing to follow the centralized care plan across the disease continuum that is set and directed by the patient's oncologist (Ferrell et al., 2017; Santos et al., 2007). Schlick and Bentrem (2019) focused on how and when palliative care treatment options should be introduced to a newly diagnosed cancer patient and advocated that concurrent use of curative and palliative treatments improves the oncology patient's quality of life. Full access to resources can provide a more comprehensive treatment plan for a solid tumor oncology patient.



The HNT emphasizes the need for compassion, respect, empathy, and dignity in the patient care delivery continuum. The use of the HNT provides the framework to show palliative care treatment specialists how to incorporate patient comfort measure conversations into multidisciplinary healthcare teams discussions specifically related to the patient's need for pain control and what can provide appropriate symptom management (Santos et al., 2007). Solid tumor oncology nurses are the frontline caregivers that have access to patients regularly and can understand physical, mental, and emotional needs. Providing oncology nurses with increased education surrounding palliation only aids in support that healthcare teams can provide to patients. Determining a baseline for palliative care knowledge as well as finding educational interventions that improve the understanding for this need to add palliation is the primary goal of my research with the aim of overall improvement in oncology patient care by solid tumor oncology nurses.

### **Literature Review Related to Key Variables and/or Concepts**

The literature review contains the primary areas of focus used in the review of the literature. This review is structured around the concepts of palliation, palliative care education for oncology nurses and the positive significance of these additional treatments for chronically or terminally ill patients.

### **Care and Comfort in Oncology Nursing**

Oncology nurses play a vital role in enhancing patients' quality of life by offering comfort, managing symptoms, and providing emotional support during the treatment process, whether the patient is undergoing curative, palliative, or end-of-life care.

Dobrina, et al. (2014) stressed that a solid foundational approach was needed to identify how to educate oncology nurses, specifically regarding what palliative care is and how important the opportunity of providing palliation to oncology patients can be. The context of palliative care should focus on the needs of the patient with an oncology diagnosis to create a comprehensive treatment care plan that can specifically describe what comfort measure interventions are needed to improve care delivery and patient satisfaction in oncology patient care (Dobrina, et al., 2014; Humphreys & Harman, 2014; Wu & Volker, 2012). Humphreys and Harman (2014) observed that when oncology patients received early palliative care referrals, there were decreases in patient's overall length of stay in the hospital as well as decreased use of pain medications as compared to oncology patients that received palliative care referrals during a hospital admission or even upon discharge from the hospital with associated increased use of opioid pain medications.

Palliative care nurses provide care to patients with serious, life-limiting illnesses, that focuses on improving the quality of life by managing symptoms and providing emotional and psychological support. Palliative care nurses have adapted their process of nursing from one that specifically focuses on patient care tasks, such as vital signs or treatment interventions, to one of providing comfort care and symptom management to support patients that may be dealing with significant side effects from treatments (Schroder & Lorenz, 2018; Simon et al., 2020). Emphasis can be placed on the addition of palliative care to a chronically or terminally ill patient earlier in the treatment continuum can improve symptom control that is integral to keeping the patient more comfortable (Simon et al., 2020). The addition of palliative care principles early in the

course of a diagnosis allows for patients to receive comprehensive care that addresses physical symptoms and emotional, social, and spiritual needs.

Comfort measures are interventions designed to relieve discomfort and improve the overall well-being of patients. When an oncology patient has a treatment plan where healthcare providers have ensured that comfort measure options are included it has been shown to not only maintain a positive quality of life for the patient, but also to demonstrate an increased length of time living beyond the expected given timeframe until death (Simon et al., 2020). Many nurses involved in palliative care cope with how to combine professional tasks with their knowledge learned from training into one model that maintains and consider compassionate, individualized care independent of inpatient or outpatient settings (Schroder & Lorenz, 2018). These comfort measures aim to alleviate pain, manage symptoms, and enhance emotional, psychological, and spiritual well-being.

### **Oncology Nurse Perspectives on Care and Comfort**

Nurses play a vital role in advocating for the inclusion of palliative care, focusing on improving the quality of life for patients with chronic illnesses. Opportunities for nurses to advocate for early palliative care made patients feel like their nurses were supporting personalized symptom management and personalized healthcare needs (Hannon et al., 2017). The use of oncology nurses has been highlighted as a potential bridge in palliative care delivery gaps to aid and ensure oncology patients have the correct opportunities for additional comfort treatments as an illness progresses (Hannon et al., 2017; Schroeder & Lorenz, 2018). The care, comfort, and compassion that solid

tumor oncology nurses provide for solid tumor oncology patients and families helps to build strong and trusting relationships as symptoms change or worsen or as death approaches for the patient (Schroeder & Lorenz, 2018; Wensley et al., 2017). Solid tumor oncology nurses help ensure that patients receive comprehensive care for not only their physical symptoms, but also their emotional, psychological, and spiritual needs.

Nurses recognize that understanding the concept of comfort can have different values to individual's dependent upon the severity of disease and to a patient's own ability to cope psychologically with illness or disabilities that can arise with an oncology diagnosis (Kim & Kwon, 2007). It has been emphasized that an individual's perspective or outlook regarding comfort care was found to be an extremely personal process and the need for comfort was different for each patient when faced with care needs that can vary across a disease continuum (Kim & Kwon, 2007).

### **Clinical Oncology Practice Guidelines for Palliative Oncology Care**

Clinical oncology practice guidelines for palliative oncology care are fundamental for providing evidence-based, patient-centered care to individuals with any cancer diagnosis. Kamal et al. (2020) found that current peer-reviewed literature does demonstrate the need for integration of palliative care for oncology as there is a known relationship that palliative care within a patient's care plan is noted to improve patient health outcomes. Ferrell et al. (2020) is a demonstration of the current emphasis for the need for palliative care to be integrated into basic oncology care standards. Many healthcare providers, from nurses to physicians, do follow national current standards, guidelines, or quality measure benchmarks that exist specific to palliative care and

possible palliation treatments (Kamal et al., 2020; Ferrell et al., 2020). Following guidelines and standards aid in ensuring that palliation is a part of a multi-disciplinary discussion regarding an oncology patient's active treatment care plan of a terminally ill patient or a patient that has advanced or late-stage cancer (Kamal et al., 2020). Clinical guidelines are designed to optimize symptom management, improve the quality of life, and provide support for both the patient and their family

The National Consensus Project for Hospital and Palliative Care (2018) developed principles of best practices and guidelines to provide a framework specific to caring for the oncology patient. When palliative care is discussed by nurses with patients, often it is not understood or it is not believed to be the correct approach for the patient that needs comfort care measures during cancer treatment (Kamal et al., 2020). Ferrell et al. (2020) emphasized that current research recommends palliative care be widely adopted by all oncology healthcare providers in all healthcare settings to benefit solid tumor oncology patients and their families or caregivers. Research has also been generated by CAPC that utilized evidence-based practices to advocate for palliative care by providing education for oncologic palliative care use, incorporating palliative care services into other traditional services, and effectively impacting positive communications for patients to participate in care decisions when appropriate (Rogers, Perry, & Hoerger, 2020).

At minimum, a discussion surrounding palliative care options for patients with any serious or advanced illness, unrelated to the prognosis of a patient or what current disease-specific treatments are active (Swami & Case, 2018). Research found that adding

palliative care to a solid tumor oncology patient's care plan improves symptom management and quality of life for both patients and caregivers (Kamal et al., 2020; Swami & Case, 2018). Palliative care decreases hospital admissions that are not necessary, diagnostic testing or treatments that have non-beneficial admissions into intensive care (Swami & Case, 2018).

Despite national organizations, such as the NCP or CAPC, publishing standards and guidelines for palliative care incorporation into treatment care plans, there remains to be no singular set of agreed upon guidelines that provide specific criteria needed to initiate palliative care referrals for oncology patients (Rogers et al., 2020). Not every patient with cancer will benefit from a referral for palliative care, but most patients find some benefit at some point along the continuum of oncology care (Swami & Case, 2018). The timing for referrals remains imprecise with no set standard for when practitioners initiate palliative care guidelines to follow.

The International Consortium for Health Outcomes Measurement (ICHOM) is a healthcare organization that supports patients and advocates value-based care guidelines (International Consortium for Health Outcomes Measurement [ICHOM], n.d.). These guidelines provide a way to monitor outcome measures for treatment protocols, but in an agreed upon process that focuses on well-validated areas of care, from healthcare provider reported data to patient reported health measures (ICHOM, n.d.). Development of standardized guidelines for initiating palliative care will allow for a more efficient and simplified way to monitor outcomes data, measure treatment successes, and observe the patient condition and patient satisfaction (ICHOM, n.d.; Rogers et al., 2020). Guidelines

from professional societies such as the Oncology Nurses Society and the National Hospice and Palliative Care Organization looking to integrate more outcomes measures and treatment results with the goal of collaboration between many organizations on broader sets of data related to the patient condition and not just the process of obtaining a palliative care consult for an oncology patient (Porter, Larrson, & Lee, 2016).

### **Patient Perspectives on Care and Comfort**

Care and comfort measures are multi-dimensional and go beyond just physical symptom relief. Sherman, et al. (2018) clarified through research certain areas were regarded by patients to be considered critical when thinking about what type of care is needed when leading up to end-of-life events. Patients in the study emphasized that there were broader concerns around comfort care measure and pain control options more than other aspects of patient or caregiver preparedness, and these areas revealed a significant need to ensure patients are offered palliative interventions or provide education either while in the hospital or by a healthcare provider, such as an oncology nurse, in a physician's practice (Coelho et al., 2016; Sherman et al., 2018).

The goal of palliative care for solid tumor oncology patients is to improve their quality of life. A core principle of palliative care is to deliver comfort care treatments to patients with any chronic or terminal disease (Coelho et al., 2016). It is unknown what factors improve the patient's experience or perception of comfort measures, and oncology nurses work to do what they can to ensure patients are as comfortable as they are able to offer and aid in providing care measures to make this happen (Sherman et al., 2018). Palliative care focuses on comfort and ensuring patients live fully and comfortably.

## **Nurse Education on Communicating Palliative Care Needs for Oncology Patients**

Effective communication is necessary when providing early palliative care, as it can align care with the patient's values, and facilitate decisions that improve quality of life. Herbert, Moore, and Rooney (2011) found that nurses were concerned with the lack of preparation that they had received in preparation of caring for patients with palliative care needs. It has been emphasized that a checklist approach can be utilized to assess patients to see if there is a need for palliative care (Ferrell et al., 2020; Fink, 2015; Gilligan et al., 2017). Advocating for educational initiative changes ensures that healthcare professionals can identify the needs of oncology patients and learn how to advocate for patients to add palliative services (Ferrell et al., 2020). The addition of palliative care for oncology patients can improve quality of life, dignity, and coping (Fink, 2015). Educating nurses to communicate effectively about palliative care needs can lead to better patient outcomes, including less distress and better satisfaction with care.

## **Importance of Palliation for Oncology Patients**

As the focus of oncology care shifts from curing cancer to maintaining the best quality of life, palliation becomes an important part of comprehensive cancer care. The need for palliation is emphasized by the multiple models of care delivery for solid tumor oncology patients into a palliative care treatment pathway (Bruera,2020). Understanding the fragmented care delivery system emphasizes the importance of palliative care integration based on the needs of a solid tumor oncology patients (Cassel & Albrecht; Hui & Bruera, 2020). Nurses are a crucial element in the collaborative efforts of



connecting oncology patients to palliative care specialists (Cassel & Albrecht, 2018). Schulman-Green, et al. (2018) discussed that the addition of palliation to oncology patient care provides a positive impact in a patient's quality of life, has the potential to improve communications between members of the healthcare team by removing barriers to pain management or comfort measures, and to confirm palliative care is part of the treatment care plan. By addressing the physical symptoms of cancer and the emotional, social, and spiritual needs of oncology patients, palliative care improves the overall experience of living with cancer.

### **Competencies for Oncology Nurses in Palliative Care**

Competencies for oncology nurses in palliative care are critical to ensure that oncology patients receive compassionate, patient-centered care at every stage of their cancer journey. Ross et al. (1996) developed the palliative care quiz for nursing (PCQN) to measure knowledge of palliative care nursing, create conversations about palliative care for patients, identify misconceptions of palliation, and to be used as a tool to evaluate nursing competencies. Prem et al. (2012) acknowledged that there was a knowledge deficit in oncology nurses and other health care professionals specifically relating to the key components of palliative care and often health care staff is inadequately prepared or not prepared to care for solid tumor oncology patients in need of palliative care services. Parajuli and Hupcey (2021) found in their research that solid tumor oncology nurses did not receive what they believed to be adequate knowledge specific to integration of palliative care into solid tumor oncology patient care plans. Oncology nurses can enhance the quality of life for patients facing an oncology

diagnosis, while also supporting the multidisciplinary team in delivering comprehensive care.

### **Nurse Perceived Barriers to Palliative Care for Oncology Patients**

Nurses face a variety of barriers in providing palliative care to oncology patients. Even with documented of the advantages of palliative care for solid tumor oncology patients, barriers to care exist across multiple care providers (Bradley et al., 2001; Unroe et al., 2015). While research suggests that healthcare providers are comfortable assessing patient symptoms, it is noted that healthcare providers had difficulty with understanding the concept of palliative care (Unroe et al., 2015). By overcoming barriers, nurses can enhance the quality of life for oncology patients.

Addressing barriers to care requires a multi-faceted approach. Barriers that solid tumor oncology nurses identified in providing palliative care for oncology patients include the cross collaboration between multiple specialties (Lundeby, (2020)). Solid tumor oncology nurses have continued to express beliefs about the lack of preparedness impacts how palliative care is incorporated into patient care and how there is an appreciation that education is needed to provide best practice quality care for solid tumor oncology patients (Parajuli & Hupcey, 2021). Nurses commented on frequent barriers they experience including insufficient cooperations, lack of support services, determining the amount of time needed to incorporate care, and the correct resources for each solid tumor oncology patient (Parajuli & Hupcey, 2021). There is a benefit to the patients if nurses can overcome the barriers to care that includes more training, encouraging an open

and collaborative care culture, providing adequate resources, and emphasizing the value of early palliative care integration.

### **Nursing Ideas Utilized to Decrease Barriers to Comfort Care**

The advantages that exist with open communication in an oncology setting have many benefits that can include improved well-being of patients and caregivers, increased consistency to treatment care plans, and improvements in quality of life (Hawley, 2017). However, there are considerable challenges noted by solid tumor oncology nurses when caring for solid tumor oncology patients with a need for staff to be provided with difficult communication skills training or other educational opportunities that could assist in how to overcome barriers as oncology nurses providing care for oncology patient interactions can be challenging. (Banerjee et al., 2016).

### **Gaps in Literature**

Solid tumor oncology nurses do not believe that they possess adequate knowledge regarding palliative care to feel comfortable enough to speak to oncology patients about palliation (Parajuli, 2020). The solid tumor oncology nurses' knowledge about palliative care can be impacted by the nurses' sociodemographic factors, level of education, the length of time as a solid tumor oncology nurse, previous palliative care education, or workplace clinical setting. Parajuli (2020) and Dehghani et al. (2020) theorized that development of an educational intervention specific to the way to approach palliative care should be utilized and reviewed to determine if this idea is an effective intervention in the promotion of self-belief in palliative care knowledge that leads to an understanding or assurance that a discussion of palliation is part of the patient care journey.

This review provides evidence specific to gaps in oncology nurses' knowledge specific to palliative care and helps guide the design of this study's interventions. This study is designed to assess a nurses' knowledge of palliative care and dependent on the study results, provide research that supports the need for palliative care education or competencies to be integrated in the national curriculum of nurse education. Engaging oncology nurses to update patient best practices in comfort care, particularly those with a significant number of years' experience in nursing, may help to ensure palliation is considered when providing care to oncology patients. Future research is needed to determine if goals for oncologic palliative care can bring disease symptom assessments and management together with appropriate referrals quickly to provide timely care management for patients with advanced cancer (Wadhwa et. al., 2018). My study can provide a baseline understanding of a cross section of oncology nurses' understanding of palliative care and determine the future needs for education, and competencies, which can aid in improving the oncology nurse's ability to advocate palliative care for oncology patients.

### **Summary and Conclusions**

Research that is specific to oncology patient palliative care is still needed to understand if the outcome of adding this service to oncology patient treatment plans can be determined as beneficial (Ferrell et al., 2020). Previous research studies have focused on patients with advanced stage solid tumors. Although this is a significant area for comfort measures, more research is needed across all tumor types, stages and care needs of patients after diagnosis (Back, 2020; Hausner et al., 2021).

There have been research studies specific to nursing knowledge and understanding of palliative care, most studies have been related to nursing staff caring for patients with any chronic illnesses and not specifically to the oncology patient population or include a population that comprises primarily late-stage cancer oncology patients (Rome et al., 2011; Back, 2020; Hausner et al., 2021). Researchers have largely focused on palliative care in conjunction with hospice for terminally ill patients. Solid tumor oncology nurses need a variety of educational opportunities to ensure the quality of care is focused on providing oncology patient palliative care (Hokka et al., 2020). Further research is needed to standardize nursing education, define which competencies will enhance palliative care development, and improve educational opportunities for oncology nurses in practice.

The topics covered in the literature review addressed several aspects of the inclusion of palliation into an oncology patient's treatment care plan. Addition of palliative care has shown that there can be improved outcomes for this patient population (Hauser et al., 2021; Back, 2020). This study is an opportunity to fill the knowledge gap that exists today regarding oncology nursing and palliative care treatments for any oncology patient with early-stage or late-stage disease.

Ayed et al. (2015) provided a study related to the palliative care knowledge level of solid tumor oncology nurses and how it could be correlated to their attitudes regarding providing palliation. Additional research can only add to the current evidence to support providing nursing competencies for palliative care, existing literature does emphasize that more educational opportunities for understanding the concept of palliative care treatments

in oncology are needed (Martin, 2021). Further research is needed to broaden solid tumor oncology nurses' knowledge base and to standardize educational opportunities for solid tumor oncology nurses specific to palliative care opportunities to improve quality of life for solid tumor oncology patients. I will present an overview of the quantitative approach, using HNT and data in Chapter 3.

## Chapter 3: Research Method

### **Introduction**

The purpose of this study was to determine (a) what effect an online module will have on the understanding that an oncology nurse has specific to palliative care for solid tumor oncology patients, and (b) what effect an online module will have on an oncology nurse's recognition of how palliative care treatments positively impact solid tumor oncology patients. In Chapter 3, I discussed my planned research design, setting, participant population, tools, data collection processes, and data analysis that I used for this study.

### **Research Design and Rationale**

The design of my study was a one group quantitative, pretest, posttest, cross-sectional study. I focused specifically on solid tumor oncology nurses and their understanding and recognition of the need for palliative care treatments in solid tumor oncology patient's care plans. Palliative care is appropriate for many different disease types, but I am focusing on solid tumor oncology nurses who care for solid tumor oncology patients. Participants completed the Palliative Care Quiz for Nursing (PCQN) created by Ross, et al. (1996) as the pretest and posttest with an online module explaining palliative care from the Center to Advance Palliative Care (CAPC, nd).

The independent variable was the online module with the dependent variables consisting of a nurse's understanding of palliative care and recognition of palliative care treatments for solid tumor oncology patients. I was aware there is the potential for

selection bias when using a convenience sample, but my goal is to have a diverse group of participants.

### **Research Setting**

The setting for this study was variable and was dependent upon the physical location of participants, but all four components of the research for my dissertation were completed in an online environment. The online platform that I utilized for research was Qualtrics ([www.qualtrics.com](http://www.qualtrics.com)). Qualtrics is a password-protected online research platform that will allow research participants to access the four components of my study from one originating online site. This means that participants accessed (a) the consent and study instructions, (b) the participant demographic questions, (c) the pretest for initial measurement of knowledge and understanding of palliative care for oncology patients, (d) the online module, and (e) the posttest measurements to assess if the online module had an impact on solid tumor oncology nurse understanding and recognition of palliative care interventions for solid tumor oncology patients.

To recruit individuals to participate in this study, I used various social media platforms. These platforms included media like Facebook, Instagram, and LinkedIn. Also, I used forum message boards located on professional nursing societies websites, such as the Oncology Nursing Society or the American Nurses' Society, to network with and recruit other solid tumor oncology nurses for participation.



## **Methodology**

### **Population**

Solid tumor oncology nurses involved in direct patient care were recruited from healthcare settings across the United States. The goal for my research was to recruit a minimum of 35 oncology nurses as participants for this study. Participant recruitment began after the IRB from Walden University IRB and from the WCG IRB, a centralized IRB, gave their approvals. After acceptance from both IRBs, I requested participation on nursing forums and social media sites. I allowed for a 4-week timeframe for completion of this study once I shared the anonymous link to each research survey portfolio. I asked participants to complete all study activities at one time.

### **Sampling and Sampling Procedures**

For my study, I used convenience sampling as my non-probability sampling method (Stratton, 2021). The convenience sampling process is considered appropriate for my study because my participants are being randomly chosen, but with specific criteria requirements that will determine the population group I am interested in understanding if any knowledge gap exists with the use of oncology palliative care.

Within the recruitment email and flyer shared to potential participants, there was information that briefly described the purpose of the study, permission information needed, data collection procedures, contact information, and a direct link to the online study site in Qualtrics (see Appendix A). I provided my Walden student email address as a primary contact. Confidentiality was ensured and preserved for participants of my

research study. Participants who agreed to be involved with my study had the right to withdraw their participation from the study at any time.

The G\* Power software program can perform several different types of statistical power analyses and develop graphic representations of the results received (Faul et al., 2007). I used the G\* Power software program, I calculated my sample size with a two-tailed Wilcoxon signed -ranked with matched pairs, effect size of 0.5, alpha of .05 and power of .80. The G\* power calculation showed I need 35 participants (Faul et al., 2007). There was a total of 67 participants for this research.

### **Procedure for Recruitment, Participation, and Data Collection**

After all the necessary processes for completing my proposal stage of this research study are finalized, I applied for IRB approval through Walden University and the centralized IRB WCG since participation which enabled me to recruit oncology nurse participants who may have lived or worked in various geographical areas of the United States and ensured that I had an IRB coverage for an interventional study since Walden IRB will not be responsible for any interventional research study. Walden IRB approval #03-08-24-0530859 was obtained and participants were recruited using the IRB approved materials through all channels of networking access such as open forums on websites or national nursing societies/organizations (see Appendix A). WCG IRB provided an IRB exempt status for this research study. Other options for recruitment that I considered if I am having difficulty achieving a statistically significant population would be posting the participation request on online blogs or member forums where oncology nurses participate. I wrote social media posts on my own social media pages with a goal of

helping to encourage respondents to share the post requesting oncology nurse participation on their own social media pages in a process like snowball sampling (McRobert, et al., 2018).

To recruit participants, I distributed my recruitment email and recruitment flyer (see Appendix A & Appendix B) to the Oncology Nursing Society's open forum, the American Nurses' Associations site specific forum boards, and other possible oncology nursing sites to increase recruitment. If an individual was interested in participant, they clicked on the link on the flyer which directed them to the consent that contains the required screening questions to ensure an appropriate patient population:

1. Are you a registered nurse that works full-time or part-time with solid tumor oncology patients?
2. Are you 18 years or older?

Once the respondent read the consent and answers *yes* to these questions, the screen advanced to the demographic questions (see Appendix C) for this study. If the individual answered no, they were thanked for their interest and the screen closed.

Participants completed the pretest, and then used the website link to the CAPC website for the online module and then returned to the Qualtrics platform. The PCQN posttest was the last assessment to be completed by participants. When participants completed the posttest questionnaire, the participants were thanked for their time and the study closed. The entire study took approximately 30 minutes to complete for each participant. After reaching 67 participants, the sample size was enough to provide statistically significant results, data were assessed and evaluated.

## **Instrumentation and Operationalization of Constructs**

The online module was developed by the Center to Advance Palliative Care developed in 2019 (see Appendix E). The title of this educational module is “Introduction to Palliative Care for Healthcare Professionals,” (CAPC, 2024). This palliative care module provides the definition of palliative care, what patients benefit from palliative care, how palliative care delivery should be, and how palliative care differs significantly from hospice care (CAPC, 2024). The pretest and posttest that I used will both be the PCQN that was developed in 1996. The PCQN study was developed to measure a nurse’s knowledge of palliative care (Ross et al., 1996). Permission to use the PCQN was secured from Bourbonnais, at the University of Ottawa (see Appendix F).

Validity is defined as the level where a research study can establish a consistent relationship between a study intervention and an outcome to show the effectiveness of the study design capturing data that answers the initial research questions (Noble & Smith, 2015). The PCQN questionnaire, designed by Ross et al. (1996), has been widely used in palliative care research (see Appendix E). The PCQN measures basic palliative care knowledge of nurses, not specific to oncology nursing, but questions from the survey are appropriate for oncology nurses that care for oncology patients (Ross et al., 1996) and is comprised of 20 questions that are grouped into three different categories: (a) philosophy and beliefs, (b) symptom management, and (c) psychosocial/spiritual care (Ross et al., 1996).

All 20 questions have the same three choices for answers that include: true, false, and don’t know. The PCQN has acceptable validity and reliability results allowing it to

be considered a consistent tool when assessing basic palliative care knowledge of nurses (Carroll et al., 2005; Kim et al., 2011). To ensure the PCQN questions would meet the needs of understanding if a nurse had an improved knowledge of palliation, items of consideration were evaluated for clarity and relevance to current patient care practices of nurses (Ross et al., 1996). The results obtained from the participants provided enough information for the PCQN advisory committee to determine which questions were statistically significant, the average item difficulty, and primarily what the test-retest reliability showed (Ross et al., 1996). According to Ross et al., (1996) the scale found that there was high content validity, and a satisfactory reliability in scoring with a test-retest  $\frac{1}{4}$  0.56 and Kuder–Richardson 20  $\frac{1}{4}$  0.78.

As Ross et al. (1996) were developing this specific questionnaire, the criteria that were considered important for the tool was to be concise, ensuring there would be no difficulty administering or completing the questionnaire. Also, to account for the variability of educational backgrounds, Ross et al. (1996) focused on maintaining an ease of language to support the utilization of the tool for many different healthcare settings. The other two primary goals of development were to include things that nurses would be likely to encounter within their practice, and to focus on detailed areas of care that are fundamental to palliative care practice (Ross et al., 1996).

A demographic information form (see Appendix C) was completed prior to reaching the next steps of a pretest, intervention, and then posttest. The demographic data instrument included the oncology nurse's age, gender, race/ethnicity, length of time as an

oncology nurse, area of nursing where oncology patients are cared for, and any personal or professional experience with palliative care.

## **Data Analysis Plan**

### ***Research Questions***

The research questions for my study were:

RQ1: What effect will a brief palliative care online module have on the understanding of solid tumor oncology nurses caring for solid tumor oncology patients?

$H_{01}$ : There will be no difference in the understanding of palliative care treatments for oncology patients by solid tumor oncology nurses after a brief palliative care online module.

$H_1$ : There will be a difference in the understanding of palliative care treatment for oncology patients by solid tumor oncology nurses after a brief palliative care online module.

RQ2: What effect will a brief palliative care online module have on a solid tumor oncology nurse's recognition of palliative care treatments for solid tumor oncology patients?

$H_{02}$ : There will be no difference in the recognition level of palliative care treatments for solid tumor oncology patients after a brief palliative care online module.

$H_2$ : There will be a difference in the recognition level of palliative care treatments for oncology patients after a brief palliative care online module.

I analyzed my data using the Wilcoxon test because this test was used to compare the means of measurement taken at two different times from the same sample of

participants. The Wilcoxon test is a nonparametric test that I planned to use to evaluate my dependent ordinal variables of *yes*, *no*, or *don't know*. My categorical variable was that the same group of oncology nurses took the pretest and the posttest to review everyone's data set to determine if the educational intervention was effective. I tested the assumptions of the Wilcoxon signed-rank test which included differences are independent from each other, all differences will have the same median, and the measurement scale is no more descriptive than interval level data.

There were 20 questions on the PCQN so the highest score obtainable was 20 and lowest score was zero. For my study, each question had a representative value for correct answers and zero for *incorrect/don't know* responses. These dummy variables were analyzed using the Wilcoxon Signed Rank test. I evaluated the data to ensure that I have a pretest and posttest from each participant. This ensured that my study data are matched correctly to evaluate and determine if the educational intervention does make a significant difference in an oncology nurses' knowledge of palliative care. I summarized and reported the demographic variables related to the education level of the oncology nurse, years of nursing experience, and if the oncology nurse has any previous education or practice opportunities with palliative care. The demographic questions asked for this study are provided in Appendix C.

I used SPSS software version: 28.0.1.0 to analyze my data. After my data collection was completed, data was 44 transferred from Qualtrics into the SPSS software program for analysis. Items that I collected from the demographic information about participants were analyzed and presented using descriptive statistics that Qualtrics will be

used for analysis. The pretest and posttest items to measure oncology nurse knowledge were scored as either true, false, or don't know. With the correct answer correlating to a dummy variable of one and an incorrect or don't know answer equaling zero. The highest score that can be obtained on this questionnaire was 20 and the lowest score was zero.

### **Threats to Validity**

#### **External Validity**

As I focused on the methodology of this research, I was aware of any potential threats to the validity of my data. Potential threats that can impact results of my study include oncology nurses that already have a prior knowledge of palliative care, oncology nurses that may not have a working knowledge of how to use the Qualtrics survey platform, or oncology nurses that have training experience in providing palliative care for oncology patients. There was the potential for testing to effect outcomes.

The pretest that was the same questionnaire as the posttest can feasibly impact the validity of my study since there the time between taking the pretest and posttest is approximately 20 minutes. Also, testing reactivity may occur as nurses will know they are part of this study behaviors may change and there may be more attention given to the pretest, posttest, and interest in completing the educational online module. Other questions considered were if my basic conclusions were correct, can the change in responses from the pretest and posttest be caused by the PCQN, or are there other variables involved that I need to assess for as a threat to external validity. Due to this study's participant pool being a convenience sample. There was a lack of generalization



for the entire population surrounding the interaction effects of selection and experimental variables used for my research.

### **Internal Validity**

For internal validity, I was aware of testing as use of the same test can cause the pretest to influence the posttest results. Participants were determined by a convenience sample, so this sample did not represent the general population. Selection-maturation or maturation was an issue for my research as this study is over a short timeframe of approximately 30 minutes.

### **Ethical Procedures**

I obtained IRB approval from the Walden IRB (03-08-24-0530859) and WCG IRB provided IRB Exemption Status (see Appendix F). Before individuals consented to participate in my study, I attached an email invitation letter (see Appendix A) explaining that participation in this research is voluntary, and all submissions of demographics, the pretest, and posttest remain anonymous throughout this research study. The recruitment email and recruitment flyer contained the direct anonymous link to the research study information.

This consent form contained information regarding the purpose of this study and what tasks participants will be asked to take part in for this research study. The consent form explained what data would be collected and how their privacy was protected. I did not collect any information that could identify any of the participants that agree to be part of this research study, so confidentiality was maintained. The information and data obtained from Qualtrics is kept in a password protected file on my computer, and only

myself and my committee members will have access to the data. I will keep the data for a minimum of 5 years in this protected file and then I will ensure deletion of this file.

Individuals that were potential participants who choose not to participate will be able to withdraw from the study and cease participation at any time. My goal was to ensure minimal risk exists for participants in this voluntary and anonymous survey for this research study. The participants in this research did not include any vulnerable populations, and participants were oncology nurses with an assumption being made that they are all cognitively intact. Participants were not involved in coercion and participants did not receive any type of compensation for their volunteer efforts in this study.

### **Summary**

There is an awareness that due to COVID-19 the participant recruitment process originally planned had to change and this may impact participation. I made considerations in the recruitment process and how consent will be obtained and information about the study will be shared with participants.

Educational interventions for palliative care are aimed at improving nursing understanding to enhance the quality of care provided to solid tumor oncology patients, promote professional growth, and continue to focus on the latest evidence-based practices. Educational interventions have been shown to encourage continued learning and increase personal confidence for nurses when providing palliative care (Harden et al., 2017). The purpose of this quantitative, one group pretest posttest study, guided by the Humanistic Nursing theory, was to determine (a) what effect a palliative care online module has on the understanding of palliative care options in solid tumor oncology

nursing care, and (b) what effect an online palliative care module has on a solid tumor oncology nurse's recognition of palliative care options in solid tumor oncology nursing care. The educational intervention was a recorded presentation specifically for healthcare workers and how to support patients and families with palliative care as part of a patient's treatment plan. This outcome was evaluated by reviewing the pretest results and posttest results in conjunction with providing an educational intervention specific to palliative care. This study included data collection, the plan for review of results, and a conclusion of what can be learned from this information. In Chapter 4, I present the results of my study.

## Chapter 4: Results

### **Introduction**

The purpose of this quantitative one group, pretest posttest study, guided by the Humanistic Nursing theory, was to determine (a) what effect a palliative care online module has on the understanding of palliative care options in solid tumor oncology nursing care, and (b) what effect an online palliative care module has on a solid tumor oncology nurse's recognition of palliative care options in solid tumor oncology nursing care. The research questions were:

RQ 1. What effect will a brief palliative care online module have on a solid tumor oncology nurse's understanding of palliative care treatments for solid tumor oncology patients?

RQ 2. What effect will a brief palliative care online module have on a solid tumor oncology nurse's recognition of palliative care treatments for solid tumor oncology patients?

In this chapter, I present data collection, descriptive statistics of my study, and the results of my study.

### **Data Collection**

A total of 73 solid tumor oncology nurses completed this survey. Among the 73 respondents, 4 were blank and removed from the data analysis. In addition, 2 participants were pediatric solid tumor oncology nurses. Those participants did not meet inclusionary criteria and were excluded from the sample, resulting in a total sample population of 67 participants for final data analysis.

The age of participants ranged from a minimum age of 25 to an age grouping of 65 or older than three participants in this study selected. The highest number of participants (23) were in the 45-54-year-old age group. Most of the participants were female (95.5%), White/ (85.1%), and held a bachelor's degree in nursing (62.7%). Most participants (21) had 5 to 10 years of experience as a solid tumor oncology nurse. Predominantly, there were 56 participants (83.6%) that listed their working status as employed, full-time.

## **Results**

### **Descriptive Statistics**

Table 1 represents the participant's descriptive characteristics.

Table 1

*Descriptive Statistics of Participants (N = 67)*

Characteristic	Frequency (percentage)
<b>Age (N = 67)</b>	
under 25	0 (0.0%)
25-34	5 (7.5%)
35-44	21 (31.3%)
45-54	23 (34.3%)
55-64	15 (22.4%)
65 or older	3 (4.5%)
<b>Gender (N = 67)</b>	
Female	64 (95.5%)
Male	3 (4.5%)
<b>Race (N = 67)</b>	
White or Caucasian	57 (85.1%)
Black or African American	5 (7.5%)
Hispanic or Latino	4 (6.0%)
Multiple Ethnicities or Other	1 (1.5%)
<b>Highest level of education completed (N = 67)</b>	
Bachelor of Science in Nursing	42 (62.7%)
Master of Science in Nursing	25 (37.3%)
<b>Years of experience as an oncology nurse (N = 67)</b>	
0-5 years	10 (14.9%)
5-10 years	21 (31.3%)
10-15 years	14 (20.9%)
15-20 years	10 (14.9%)
20+ years	12 (17.9%)
<b>Current work status</b>	
Not Employed, Looking for work	1 (1.5%)
Employed PRN, Working as needed	4 (6.0%)
Employed, Working Part-time	6 (9.0%)
Employed, Working Full-time	56 (83.6%)

## Assumptions

The original plan for data analysis was to use a Wilcoxon test. I was able to evaluate the data with a paired  $t$  test instead of a Wilcoxon test as my data met the assumptions of a parametric test as the data was normally distributed. I was unsure if there would be outliers with the data so the initial thought was a non-parametric test that would not rely on the assumption of normal distribution was the initial plan for data evaluation. As I was able to use the paired  $t$  test, it is noted that there is more statistical power than a Wilcoxon test so if there is a significant difference, I would be more likely to detect this finding (Kim, 2014). A paired  $t$  test was appropriate to compare my study data as I was comparing the results of the pretest and posttest.

The assumptions of a paired  $t$  test include: (a) data can be measured on a continuous scale, (b) data are normally distributed, (c) data are measured at the interval level, (d) there are no significant outliers in the data (Shukla, 2023). The PCQN survey that I used as my online module intervention was measured at the interval level (Ross & McGuinness, 1996). Using the Qualtrics platform, I was able to ensure that each participant's answers remained matched from the pretest to the posttest. This is significant for using the paired  $t$  test as the research participant group needed to be measured at two occasions on the same dependent variable which was the online palliative care module that provided information to the group of solid tumor oncology nurses that participated in my study.

Figure 3 is the pretest histogram that represents a normal distribution of the answers from the PCQN which allowed me to move forward with utilization of a paired  $t$

test as it was a representation of one of the primary assumptions needed to utilize a paired  $t$  test.

**Figure 3**

*Pretest Histogram*

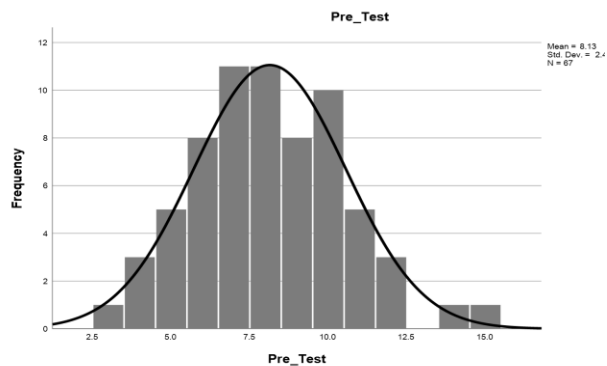
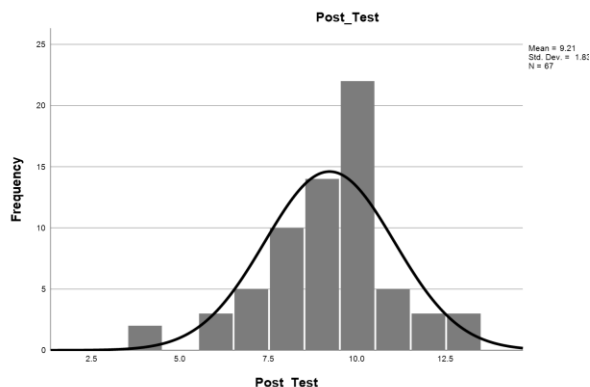


Figure 4 is the posttest histogram that represents the change in participant knowledge and understanding of palliative care after utilization of the online module that emphasized palliative care as part of a solid tumor oncology patient's treatment care plan. There was a noted shift in the histogram that aided in explaining the significance of the online module improving solid tumor oncology nurses' knowledge level specific to the concept of palliative care.



**Figure 4***Posttest Histogram***Research Question 1**

Research Question 1: What effect will a brief palliative care online module have on the understanding of palliative care options in solid tumor oncology nursing?

*H<sub>0</sub>*: There will be no difference in the understanding level of palliative care options for oncology patients by solid tumor oncology nurses after a brief palliative care online module.

*H<sub>1</sub>*: There will be a difference in the understanding level of palliative care treatments for oncology patients by solid tumor oncology nurses after a brief palliative care online module.

Review of the paired sample *t*-test showed that the mean difference of understanding palliative care in the solid tumor adult oncology nurse population after the online module intervention [*Mean* difference = -1.075, *SD* =2.211, 95% *CI* (-1.614, -.535)] was statistically significant at the .05 level of significance ( $t = -3.978$ ,  $df = 66$ ,  $p$

<.001). Therefore, the null hypothesis is rejected and there is a difference in the understanding of palliative care treatments for solid tumor oncology nurses. The effect size for this paired  $t$  test can be defined by reviewing Cohen's  $d$  statistical value ( $d = .486$ ). This result shows a moderate effect size in measurements and is enough to be significant in a practical setting as well (Althubaiti, 2022).

### **Research Question 2**

RQ2: What effect will a brief palliative care online module have on a solid tumor oncology nurse's recognition level of palliative care options for solid tumor oncology patients?

$H_{02}$ : There will be no difference in the recognition level of understanding among solid tumor oncology nurses of palliative care treatments for oncology patients after a brief palliative care online module.

$H_2$ : There will be a difference in the recognition level of understanding among solid tumor oncology nurses of palliative care treatments for oncology patients after a brief palliative care online module.

Results of the paired sample  $t$  test showed that the mean difference of recognition needed for palliative care in the solid tumor adult oncology nurse population after the online module intervention [ $Mean$  difference = -1.075,  $SD = 2.211$ , 95%  $CI$  (-1.614, -.535)] was statistically significant at the .05 level of significance ( $t = -3.978$ ,  $df = 66$ ,  $p < .001$ ). The null hypothesis is rejected and there is a significant difference in the recognition level of the need for palliative care as part of the solid tumor oncology patient's care plan for treatment. The effect size for this paired  $t$  test can be defined by

reviewing Cohen's  $d$  statistical value ( $d = .486$ ). This result represents a moderate effect size in measurements and this can be substantial enough to be considered meaningful in a practical context as well (Althubaiti, 2022).

**Table 2.**

*Results of Paired T Test*

	Mean	<i>N</i>	Std. deviation	Std. error mean
Pretest	8.13	67	2.418	.295
Posttest	9.21	67	1.830	.224

**Table 3**

*Paired Samples Correlations*

	<i>N</i>	Correlation	Significance	
			One-sided <i>p</i>	Two-sided <i>p</i>
Pretest & Posttest	67	.487	<.001	<.001

**Table 4***Paired Sample Test*

	Paired differences			95% Confidence interval of the difference		<i>t</i>	<i>df</i>	Significance	
	Mean	Std. deviation	Std. error mean	Lower	Upper			One-sided <i>p</i>	Two-sided <i>p</i>
Pretest & Posttest	-1.075	2.211	.270	-1.614	-.535	- 3.978	66	<.001	<.001

**Table 5***Paired Samples Effect Sizes*

		Standardizer (a.)	Point estimate	95% Confidence interval lower	95% Confidence interval upper
Pretest & Posttest	Cohen's d	2.211	-.486	-.738	-.231
	Hedges' correction	2.236	-.481	-.729	-.228

*Note:* a. The denominator used in estimating the effect sizes. Cohen's d uses the sample standard deviation of the mean difference. Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

**Summary**

The purpose of this study was to examine the understanding and recognition for the need of palliative care for solid tumor oncology patients by solid tumor oncology nurses. The principles of understanding and recognition are core foundational concepts in nursing as they are often interrelated in the critical thinking process that oncology nurses use to care for patients (Moran, Bailey, & Doody, 2024). In this chapter, data collection

was discussed, the research study sample was described, and data was evaluated using SPSS 28 for statistical analysis. The results of this one group quantitative, pretest, posttest, cross-sectional study was presented. The pretest and posttest for my study was the PCQN survey tool. Cronbach's alpha coefficient for the PCQN survey tool was determined to be 0.85 (Ross & McGuinness, 1996). Understanding the value of the Cronbach's alpha coefficient provides an understanding that the survey tool is reliable as it produces consistent measures of a specific concept (Sürücü, & Maslakçı, 2020).

The study sample consisted of 67 solid tumor oncology nurses who were predominately female (95.5%), White (85.1%) with an age range of 45-54 years (34.3%). The main goal of my study was to determine the influence of a palliative care online module on increasing the understanding and recognition of the need for palliative care for solid tumor oncology patients. Results of the paired sample *t*-test showed that the mean difference of recognition and understanding having an effect size represented by Cohen's *d* ( $d = .486$ ) showing that utilization of the online module was statistically significant at the .05 level of significance ( $t = -3.978, df = 66, p < .001$ ). These findings represented the validity of the research and the need for solid tumor oncology nurses to be provided with more information on palliative care. In Chapter 5, I discuss findings from this study and review the implications of this research and future opportunities that exist from this study.

## Chapter 5

### Introduction

The purpose of this quantitative one group, pretest posttest study, guided by the Humanistic Nursing theory, was to determine (a) what effect a palliative care online module has on the understanding of palliative care options in solid tumor oncology nursing care, and (b) what effect an online palliative care module has on a solid tumor oncology nurse's recognition of palliative care options in solid tumor oncology nursing care. Hannon et al. (2017) emphasized the importance of early palliation referrals for oncology patients as a best practice in patient care. The process of improving education and advocacy for oncology nurses does not exist in current care standards (Moran et al., 2024). As Mann et al. (2019) noted, there are limited studies on nursing knowledge of and the ability to provide palliative care measures to oncology patients.

I analyzed the data with a paired  $t$  test to compare the two population means from participants that took the PCQN. Results of the paired sample  $t$ -test showed that the mean difference of recognition needed for palliative care in the solid tumor adult oncology nurse population after the online module intervention was statistically significant at the .05 level of significance ( $t = -3.978, df = 66, p < .001$ ). These findings represented the validity of the research and the need for solid tumor oncology nurses to be provided with more information on palliative care. The effect size for this paired  $t$  test was defined by the Cohen's  $d$  statistical value ( $d = .486$ ). This result represented a moderate effect size which provides consideration that this study was developed with the practical framework to determine the value of providing palliative care information to solid tumor oncology

nurses. This demonstrated that my study intervention had a visible influence in creating a positive change in the solid tumor oncology nursing awareness of palliative care education, but this study is not necessarily large enough to be considered a major or significant practice change without further research.

### **Interpretation of the Findings**

Educational gaps for solid tumor oncology nurses can impact any nurses' ability to provide optimal care to patients facing chronic illnesses. The Oncology Nursing Society (ONS) has recognized continued gaps in palliative care education for oncology nurses and the need for programs, training and other resources as of their Palliative Care for People with Cancer position statement (Oncology Nursing Society, 2022). A second review of updated literature found that there were still significant needs in providing palliative care education to oncology nurses. Almutairi et al. (2023) found that oncology nurses were lacking both knowledge and confidence in providing palliative care to their patients. Parajuli and Hupcey (2021) showed that oncology nurses explained the definition of palliative care to primarily be symptom management, but to deliver the full value of palliative care to solid tumor oncology patients' additional education in palliative care would be needed. Altarawneh et al. (2023) presented results that affirmed the importance of inclusion of palliative care education programs to help solid tumor oncology nurses become more skilled and efficient in how they can provide optimal oncology nursing assessments and quality care delivery. The goal of addressing the educational gaps is to improve patient outcomes and ensure solid tumor oncology nurses

are equipped with necessary skills to deliver compassionate, comprehensive, and effective palliative care.

My research supports the findings from these studies that there is a continued need to further educate nurses about the importance of providing palliative care to solid tumor oncology patients. My research echoes the studies from Chapter 2 that emphasize additional education on how palliative care improves quality of life is integral to an oncology nurse's ability to provide evidence-based best practice care (Harden et al., 2017).

### **Limitations of the Study**

There were several limitations of this study. The demographic sample of this study was largely uniform in gender, race, and length of time as a solid tumor oncology nurse. Most of the participants in this study were White, female, with 5 to 10 years of experience in oncology nurses and with a Bachelor of Science in Nursing. A larger diverse sample that could include a broader range of ages, race identification, and gender would produce more generalizable results. Also, this was a study that took approximately 30 minutes to complete from the demographic information through the posttest and there was nothing incentivized provided to participants, they volunteered their time to help with developing more research around palliative care. With a relatively small sample size of 67 participants, the results may not be generalizable to all solid tumor oncology nurses' and their knowledge of palliative care.



### **Recommendations**

Future studies should be conducted utilizing more participants, ensuring that the study has increased diversity of the participant population. Also, other methods such as a qualitative or mixed methods longitudinal study could provide information for better understanding of why solid tumor oncology nurses lack understanding and recognition of palliative care and what knowledge solid tumor nurses need to understand palliative care. Qualitative interviews of solid tumor oncology nurses could provide greater context to the reasons why there was a significant difference in the responses from the pretest and posttest after an online educational module was utilized.

### **Implications**

As patients are living longer with a solid tumor cancer diagnosis, both the disease process and the needed treatments can cause distressing symptoms that impair quality of life. There are many implications to nursing education and nursing practice.

#### **Implications for Nursing Education**

As the future of palliative care interventions increase for solid tumor oncology patients, nurses need to ensure their nursing competencies start to shift their focus to a more holistic approach that can increase their knowledge base to incorporate palliative care into clinical practice, education, and research so that they can support patients that are living longer with increasingly complex health issues while allowing for a dignified death when end of life care measures are implemented (Cohen et al., 2023).

The findings of this study indicate that solid tumor oncology nurses have a general understanding of palliative care, but there continues to be substantial room for

improvement in the areas examined in my study. The results of this study help to confirm the need to incorporate educational programs for nurses regarding palliative care. These programs or offering for more palliative care education could be considered as additions to the curriculum taught in nursing school, but also this is a topic worth focusing on for nurses already in practice. This information about palliative care could be provided through classes, workshops, or competency validation for nurses currently in practice. Specialized knowledge of palliative care could lead to improved quality of solid tumor oncology patient care and patient outcomes such as ONS (2022) emphasized that healthcare professionals need access to educational programs, resources, and training specific to palliative care to improve outcomes for oncology patients.

### **Implications for Nursing Practice**

The results of my study showed that solid tumor oncology nurses benefited from an education program about palliative care. Solera-Gómez et al. (2022) highlighted that oncology nursing interventions were found to be of significant benefit to oncology patients when educational approaches were used. Continuous learning for oncology nurses is necessary as evidence continues to suggest educational gaps exist, but continuing educational interventions aid in overcoming noted care deficiencies (Solera-Gómez et al., 2022). ONS (2022) referenced that all patients can benefit from the addition of palliative care and oncology nurses have an ethical responsibility to obtain and use in practice current knowledge of palliative care to improve the outcomes of patient care delivery.

## Conclusion

Patients with solid tumors suffer from complex health problems that include symptom burden, psychosocial distress, and often a diminished quality of life. Palliative care can be implemented into a patient's treatment plan to assist with symptom management and aid in improvements in the quality of lives of cancer patients and their families/caregivers. Solid tumor oncology nurses are involved and provide care across the continuum of a patient's illness trajectory. Solid tumor oncology nurses play an integral role in providing palliative care to patients and often have multiple opportunities to refer patients with cancer for palliative care consultations.

Even with emphasis on quality improvements that have been noted when palliative care is part of a patient's multidisciplinary care plan, there continues to be limited evidence on the nursing interventions and evaluation strategies used by nurses to highlight the importance of their role in caring for patients and their families are not well studied (Moran et al., 2024).

The oncology nursing role is poorly understood when oncology patients have additional treatment planning that includes palliative care (Moran et al., 2024). With more understanding and recognition of how palliative care layers into a patient's treatment plan, nurses find ways to bring the complexity of their role into the treatment team and learn how to implement palliative care measures that can benefit patients and families. Following on and building on the research previously identified in this study specific to the value of palliative care nursing, this research aims to emphasize contributions that oncology nursing can provide to patients if they understand what

palliative care measures are and how to advocate for provider additions of palliative care services to oncology patient treatment plans.

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## Appendix A: Nurse Recruitment Email

Dear Solid Tumor Oncology Nurse,

A Walden University nursing doctoral candidate is looking for solid tumor oncology nurses that with solid tumor oncology patients care. The purposes of this study are to determine (a) if a pre-assessment of a palliative care healthcare online module and the same test utilized as the post-assessment can improve the understanding of palliative care options in solid tumor oncology nursing and (b) what effect an online module intervention will have on a solid tumor oncology nurse's recognition of palliative care options in solid tumor oncology nursing care.

This study seeks approximately 35 volunteers who are:

- Solid Tumor Oncology Nurses
- Over age 18

Participation in this study involves:

- Electronic Consent review and agreement
- Answer six demographic questions
- Completion of a 30-minute pretest, online module, and posttest

For more information about this study, please contact the Principal Investigator, Micah McArthur.

Study Title: Assessment of a Palliative Care Education for Oncology Nurse

## Appendix B: Recruitment Flyer



## Solid Tumor Oncology Nurses Needed for Palliative Care Research



- Research Participants Needed
- Do you have an interest in palliative care opportunities for solid tumor oncology patients?
- Are you interested in being part of an online doctoral student's research study?
  - Are you an oncology nurse that works with solid tumors
  - Are you over age 18
  - If interested and still have questions please reach out to Micah McArthur,

Research Participants Needed



## Appendix C : Demographic Data Questionnaire

**1. Gender**

- Male
- Female
- Transgender Male
- Transgender Female
- Gender Variant/Non-Conforming
- Not Listed (please enter in text box)
- Prefer not to answer

**2. Age**

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65 or older
- Prefer not to say

**3. Which race or ethnicity best describes you?**

- American Indian or Alaskan Native
- Asian or Pacific Islander
- Black or African American
- Hispanic or Latino
- White
- Multiple Ethnicity/Other (please enter in text box)
- Prefer not to say

**4. Highest Education Level:**

- Associate degree
- Bachelor's degree
- Master's degree
- Doctorate degree
- Other (please specify)

**5. What is your current employment status?**

- Employed, working full-time
- Employed, working part-time
- Employed, working as PRN/as needed
- Not Employed, currently looking for employment



**6. How long have you worked as an oncology nurse?**

- 0-5 years of experience
- 5-10 years of experience
- 10-15 years of experience
- 15-20 years of experience
- 20+ years of experience

## Appendix D: Palliative Care Quiz for Nurses and Correct Responses to Questions

Questions		
<b>Philosophy</b>		
1	Palliative care should only be provided for patients who have no curative treatments available.	F
2	Palliative care should not be provided along with anti-cancer treatments.	F
<b>Pain</b>		
3	One of the goals of pain management is to get a good night's sleep.	T
4	When cancer pain is mild, pentazocine should be used more often than an opioid.	F
5	When opioids are taken on a regular basis, non-steroidal anti-inflammatory drugs should not be used.	F
6	The effect of opioids should decrease when pentazocine or buprenorphine hydrochloride is used together after opioids are used.	T
7	Long-term use of opioids can often induce addiction.	F
8	Use of opioids does not influence survival time.	T
<b>Dyspnoea</b>		
9	Morphine should be used to relieve dyspnoea in cancer patients.	T
10	When opioids are taken on a regular basis, respiratory depression will be common.	F
11	Oxygen saturation levels are correlated with dyspnoea.	F
12	Anticholinergic drugs or scopolamine hydrobromide are effective for alleviating bronchial secretions of dying patients.	T
<b>Psychiatric problems</b>		
13	During the last days of life, drowsiness associated with electrolyte imbalance should decrease patient discomfort.	T
14	Benzodiazepines should be effective for controlling delirium.	T
15	Some dying patients will require continuous sedation to alleviate suffering.	T
16	Morphine is often a cause of delirium in terminally ill cancer patients.	F
<b>Gastrointestinal problems</b>		
17	At terminal stages of cancer, higher calorie intake is needed compared to early stages.	F
18	There is no route except central venous for patients unable to maintain a peripheral intravenous route.	F
19	Steroids should improve appetite among patients with advanced cancer.	T
20	Intravenous infusion will not be effective for alleviating dry mouth in dying patients.	T

Question	True	False	Question	True	False
Q1. Palliative care is appropriate only in situations where there is evidence of a downhill trajectory or deterioration.	1	14	Q11. Men generally reconcile their grief more quickly than women.	1	10
Q2. Morphine is the standard used to compare the analgesic effect of other opioids.	11	4	Q12. The philosophy of palliative care is compatible with that of aggressive treatment.	5	8
Q3. The extent of the disease determines the method of managing pain.	0	15	Q13. The use of placebos is appropriate in the treatment of some types of pain.	3	9
Q4. Adjuvant therapies are important in managing pain.	14	1	Q14. In high doses, codeine causes more nausea and vomiting than morphine.	13	0
Q5. It is crucial for family members to remain at the bedside until death occurs.	0	15	Q15. Suffering and physical pain are synonymous.	1	14
Q6. During the last days of life, the drowsiness associated with electrolyte imbalance may decrease the need for sedation.	8	6	Q16. Demerol is not an effective analgesic in the control of chronic pain.	11	1
Q7. Drug addiction is a major problem when morphine is used on a long-term basis for the management of pain.	1	14	Q17. The accumulation of losses renders burnout inevitable for those who seek work in palliative care.	5	9
Q8. Individuals who are taking opioids should also follow a bowel regimen.	15	0	Q18. Manifestations of chronic pain are different from those of acute pain.	14	1
Q9. The provision of palliative care requires emotional detachment.	0	15	Q19. The loss of a distant or contentious relationship is easier to resolve than the loss of one that is close or intimate.	1	13
Q10. During the terminal stages of an illness, drugs that can cause respiratory depression are appropriate for the treatment of severe dyspnea.	12	2	Q20. The pain threshold is lowered by anxiety or fatigue.	5	9

Questions	Correct answer (%)	κ-coefficient (n = 148)	IRT			
			Difficulty	Discrimination		
<b>Philosophy</b>						
1	Palliative care should only be provided for patients who have no curative treatments available.	F	73	0.39	-1.83	0.55
2	Palliative care should not be provided along with anti-cancer treatments.	F	64	0.66	-1.29	0.47
<b>Pain</b>						
3	One of the goals of pain management is to get a good night's sleep.	T	62	0.26	-0.53	1.07
4	When cancer pain is mild, pentazocine should be used more often than an opioid.	F	42	0.49	0.30	1.40
5	When opioids are taken on a regular basis, non-steroidal anti-inflammatory drugs should not be used.	F	40	0.68	0.29	2.64
6	The effect of opioids should decrease when pentazocine or buprenorphine hydrochloride is used together after opioids are used.	T	34	0.74	0.59	1.59
7	Long-term use of opioids can often induce addiction.	F	34	0.73	0.50	2.03
8	Use of opioids does not influence survival time.	T	25	0.73	0.98	1.51
<b>Dyspnoea</b>						
9	Morphine should be used to relieve dyspnoea in cancer patients.	T	44	0.73	0.23	1.66
10	When opioids are taken on a regular basis, respiratory depression will be common.	F	12	0.62	1.47	2.01
11	Oxygen saturation levels are correlated with dyspnoea.	F	74	0.43	-1.01	1.20
12	Anticholinergic drugs or scopolamine hydrobromide are effective for alleviating bronchial secretions of dying patients.	T	17	0.7	1.19	1.92
<b>Psychiatric problems</b>						
13	During the last days of life, drowsiness associated with electrolyte imbalance should decrease patient discomfort.	T	19	0.55	1.29	1.42
14	Benzodiazepines should be effective for controlling delirium.	T	25	0.42	1.16	1.15
15	Some dying patients will require continuous sedation to alleviate suffering.	T	38	0.5	0.59	0.97
16	Morphine is often a cause of delirium in terminally ill cancer patients.	F	40	0.41	0.32	2.05
<b>Gastrointestinal problems</b>						
17	At terminal stages of cancer, higher calorie intake is needed compared to early stages.	F	38	0.53	0.47	1.49
18	There is no route except central venous for patients unable to maintain a peripheral intravenous route.	F	55	0.49	-0.22	0.98
19	Steroids should improve appetite among patients with advanced cancer.	T	35	0.72	0.42	2.59
20	Intravenous infusion will not be effective for alleviating dry mouth in dying patients.	T	40	0.39	0.57	0.81

IRT, item response theory (the numbers are analysis results for 20 items.); T, correct answer is 'right'; F, correct answer is 'wrong'. The analysis was based on participants who responded to 90% or more of the 40 items.

## Appendix E: Permission Request to use the PCQN and Response



Micah McArthur  
 Sun 3/8/2020 1:39 PM  
 To: fbourbon@uottawa.ca  
 Cc: McArthur Micah <Micah.McArthur@SarahCannon.com>



Good afternoon,

My name is Micah McArthur and I am currently in the proposal stage of my Ph.D. dissertation at Walden University. My research is specific to the assessment of palliative care knowledge and understanding of oncology nurses. I am requesting permission to utilize the Palliative Care Quiz for Nursing as the pre-test and post-test for assessing the impact on knowledge and understanding that palliative care education can have on adult oncology nurses. I found your information on the University of Ottawa's Faculty of Health Sciences page and I found information where you were able to be a representative for Dr. Ross and allow permission for the use of the PCQN in research. I am hoping this is correct, but if there is someone else that should be contacted I would appreciate assistance in guiding me to the correct individual.

Otherwise, I am requesting permission to use the PCQN for my doctoral dissertation.

Thank you for your time with this request.

Please let me know if there is anything specific I would need to do for this request.

Micah McArthur, MSN, RN, OCN, NE-BC  
 Walden University- Ph.D. Interdisciplinary Health- Nursing program



Frances Fothergill Bourbonnais <fbourbon@uottawa.ca>  
 Mon 3/9/2020 8:16 AM  
 To: Micah McArthur



Hello Micah. Yes you have permission to use the PCQN. I have looked after Dr. Ross correspondence for many years. Dr. Ross is deceased. Just be sure to quote the source of the tool from the article written by Dr. Ross and colleagues many years ago. Best wishes on your dissertation. Frances

Frances Fothergill Bourbonnais, PhD, RN  
 Emeritus Professor  
 School of Nursing,  
 University of Ottawa,  
 fbourbon@uottawa.ca  
 613-562-5800 (ext 8423)

---

**From:** Frances Fothergill Bourbonnais <fbourbon@uottawa.ca>  
**Sent:** Saturday, November 30, 2024 8:43 AM  
**To:** Micah McArthur <micah.mcarthur@waldenu.edu>  
**Subject:** Re: Request for permission to use the PCQN

Hello Micah. So glad to hear that you are completing your dissertation. As indicated in my email of March 9, 2020, you had permission to use the PCQN, developed by Dr. Margaret Ross and colleagues, in your research. You now have permission to reprint the PCQN in your dissertation. Please cite the source of the tool, Journal of Advanced Nursing, 1996, 23, 126-137.  
Sincerely,

Frances Fothergill Bourbonnais, PhD, RN  
Emeritus Professor  
School of Nursing,  
University of Ottawa,  
fbourbon@uottawa.ca

---

**From:** Micah McArthur <micah.mcarthur@waldenu.edu>  
**Sent:** Friday, November 29, 2024 2:10 PM  
**To:** Frances Fothergill Bourbonnais <fbourbon@uottawa.ca>  
**Subject:** Re: Request for permission to use the PCQN

**Attention : courriel externe | external email**

Good afternoon,

It has taken some time, but I am in the final phase of completing my dissertation. I am writing with the hope that I have the given permission to use the PCQN, and I am asking for permission to reprint the PCQN in my dissertation.

Thank you for your assistance with this.

Micah McArthur

Micah McArthur, MSN, RN, OCN, NE-BC

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## Appendix F: Online Module Intervention CAPC Permission to Use

Dulas, Jennifer <jennifer.dulas@mssm.edu>  
 Mon 1/31/2022 2:25 PM  
 To: Micah McArthur  
 Great - good luck, we'd love to hear how it works out!  
 Jennie

---

**From:** Micah McArthur  
**Sent:** Sunday, January 30, 2022, 1:44 PM  
**To:** Dulas, Jennifer <jennifer.dulas@mssm.edu>  
**Subject:** Re: Responding to CAPC inquiry

Thank you, Jennifer, for this. I have my own pretest/ posttest for evaluation, so I will not need analytic information from CAPC. Again, thank you for allowing the use of your palliative care course as my educational intervention.

Regards,  
 Micah McArthur, RN, MSN, OCN, NE-BC

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**From:** Dulas, Jennifer <jennifer.dulas@mssm.edu>  
**Sent:** Tuesday, January 18, 2022, 4:38 PM  
**To:** Micah McArthur <>  
**Subject:** Re: Responding to CAPC inquiry  
 Hi Micah -

Thanks for reaching back out, apologies for the delay! I think that using this course will be fine for your work, however we aren't able to share any information about course completion or evaluation data, will that work for you since you have a plan for your own evaluation using the PCQN? Since this course is free for the public to use, we won't run into any issues if people are completing the course but aren't CAPC members.

Please let me know if you need additional information to move forward.  
 Thanks,  
 Jennie

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**From:** Micah McArthur <>  
**Sent:** Sunday, January 16, 2022, 9:18 AM  
**To:** Dulas, Jennifer <jennifer.dulas@mssm.edu>  
**Subject:** Re: Responding to CAPC inquiry

Good afternoon,

I was reaching out again to see if there was any new information regarding the use of the free Palliative Care CEU course as the educational intervention for my palliative care dissertation (Ph.D. Nursing Interdisciplinary Health). Any new information would be appreciated as I am close to finishing my proposal and will be moving to the next stage where I will need an educational intervention.

Thank you for your assistance with this request.  
Micah McArthur MSN, RN, OCN, NE-BC  
Walden University- PhD Candidate

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**From:** Micah McArthur <>  
**Sent:** Thursday, January 6, 2022, 3:35 PM  
**To:** Dulas, Jennifer <jennifer.dulas@mssm.edu>  
**Subject:** Re: Responding to CAPC inquiry

Hi Jennie,

I appreciate the response. I am currently in the proposal phase of my dissertation here at Walden University. I have had an interest in palliative care for quite some time and have seen the benefit that patients who are lucky enough to have it transition into end-of-life care in a more understanding way (for both patients and family members). I am not currently a member of CAPC, but I have been aware of resources on the CAPC site, I receive emails from CAPC, and I stay up to date on new information surrounding oncology and palliation.

My dissertation impact is looking at the lack of knowledge/insight nurses have surrounding palliative care or how much it is lumped into being associated with hospice. My study is to use the Palliative Care Quiz for Nurses (PCQN), which I have permission from the authors to use, as my pre and posttest. I took the free CEU palliative care course on the CAPC website, and it fits perfectly with what information I want to use to assess the knowledge level of oncology nurses that work in different care settings, as well as the length of time in nursing, etc.

I have a centralized IRB I will be sending this research request through and then the Walden IRB committee will review it as well. I do not have direct reports with my current healthcare role, so no conflict of interest would exist with the use of this CAPC module. I do not have specific facilities targeted for the recruitment of participants. I am using social media networking, professional organizations like ONS, and other types of potential recruitment aids for this research among oncology nurses.

I have been on your site often during my dissertation process looking at resources or other information that can aid my research. The course below that is available to non-members is the one I would like to use as my educational intervention. The study is the PCQN, educational intervention, PCQN- basically to see if knowledge/understanding changes based on the course provided by CAPC.

Available to non-members

**An In-Depth Look At Palliative Care And Its Services**

Defining palliative care, which patients need it, how it is delivered, and how palliative care differs from hospice.

START COURSE

Thank you for reaching out to me to assist with this question. I appreciate any direction that you can provide.

Regards,

Micah McArthur, MSN, RN, OCN, NE-BE

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**From:** Dulas, Jennifer <jennifer.dulas@mssm.edu>

**Sent:** Tuesday, January 4, 2022, 4:44 PM

**To:** Micah McArthur <

**Subject:** Responding to CAPC inquiry

Hi Micah -

Thanks for reaching out to CAPC about your interest in using one of our online courses as part of your educational intervention for your PhD! My name is Jennie, and I'm CAPC's Director of Education. I'm still new in my role so I've reached out to some of our internal leadership to better understand CAPC's policies around using our courses for projects like these. Many folks are just now returning to the office and catching up, but I'm hoping I'll have more information for you shortly. In the meantime, I'll likely be asked how you heard about this course; are you part of a CAPC member organization or did you find us on your own? Have you identified the sites where you would be pre-post testing the nurses? It will help me if I can ascertain whether those orgs are CAPC members.

Thanks,

Jennie

**Jennie Dulas**

Director of Education

**CENTER TO ADVANCE  
PALLIATIVE CARE**

55 West 125 Street, Suite 1302

New York, NY 10027

(425) 610.6247

[capc.org](http://capc.org)

[getpalliativecare.org](http://getpalliativecare.org)



## Appendix G: WCG IRB Exemption



1019 39<sup>th</sup> Ave SE / Suite 120  
Puyallup, WA 98374  
855-818-2289  
[wgdclinical.com](http://wgdclinical.com)

July 10, 2023

Micah McArthur, RN, MSN  
Walden University  
5 Washington Ave  
Minneapolis, MN 55401

Dear Mrs. McArthur:

**SUBJECT: IRB EXEMPTION—REGULATORY OPINION**  
Investigator: Micah McArthur, RN, MSN  
Protocol Title: Oncology Nurses' Palliative Care Education  
Assessment

This is in response to your request for an exempt status determination for the above-referenced protocol. WCG IRB's IRB Affairs Department reviewed the study under the Common Rule and applicable guidance.

We believe the study is exempt under 45 CFR § 46.104(d)(1) because the research is conducted in established or commonly accepted educational settings and the research specifically involves normal educational practices that are not likely to adversely impact students' opportunity to learn required educational content or the assessment of educators who provide instruction.

This exemption determination can apply to multiple sites, but it does not apply to any institution that has an institutional policy of requiring an entity other than WCG IRB (such as an internal IRB) to make exemption determinations. WCG IRB cannot provide an exemption that overrides the jurisdiction of a local IRB or other institutional mechanism for determining exemptions. You are responsible for ensuring that each site to which this exemption applies can and will accept WCG IRB's exemption decision.

WCG IRB's determination of an Exemption only applies to US regulations; it does not apply to regulations or determinations for research conducted outside of the US. Please discuss with the local IRB authorities in the country where this activity is taking place to determine if local IRB review is required.

Micah McArthur, RN, MSN

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July 10, 2023

Please note that any future changes to the project may affect its exempt status, and you may want to contact WCG IRB about the effect these changes may have on the exemption status before implementing them. WCG IRB does not impose an expiration date on its IRB exemption determinations.

If you have questions, please contact WCG IRB Regulatory Affairs at 855-818-2289, or e-mail [RegulatoryAffairs@wirb.com](mailto:RegulatoryAffairs@wirb.com).

Al:jca  
D1-Exemption-McArthur (07-10-2023)  
cc: WCG IRB Accounting  
WCG IRB Work Order #1-1676715-1