Research Priorities of the Oncology Nursing Society: 2024–2027

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PROBLEM STATEMENT: To define the Oncology Nursing Society Research Agenda for 2024–2027.

DESIGN: An iterative, multiple data sources consolidation through the Research Agenda Project Team.

DATA SOURCES: Previous research priorities, literature review, stakeholder survey, and research priorities from other cancer care organizations and funding agencies.

FINDINGS: 10 evergreen statements articulated foundational values for oncology nurse scientists, and 5 topics emerged as research priorities for the upcoming three years: Advance patient-centric, precision symptom science; provide evidence for safe and effective cancer care delivery models and support of the oncology nursing workforce; describe the impact of the environment on cancer care outcomes; integrate patient navigation into cancer care across the trajectory; and advance the use of innovative methodologies in oncology nursing research.

IMPLICATIONS FOR NURSING: The Oncology Nursing Society Research Agenda is an effective resource for directing the organization's research vision. This foundational document directs funding awards and requests, mentorship, and policy initiatives.

The Oncology Nursing Society (ONS) is dedicated to advancing excellence in oncology nursing and ensuring the delivery of quality patient care. Recognizing the pivotal role that research plays in achieving these objectives, ONS has been at the forefront of promoting and defining oncology nursing research. ONS initiated its first research priority survey in 1980, with the first formally published document in 2001. This commitment to delineating research priorities has continued through subsequent years with the creation of serial research priority documents (Knobf et al., 2015; ONS, 2004; Ropka et al., 2002; 2009–2013 ONS Research Agenda Team, 2009; Von Ah et al., 2019).

These evolving priorities reflect current and emerging issues and concerns within oncology nursing and cancer care (Given, 2009). In the fall of 2023, an expert panel of 14 volunteers, reflecting diversity in years of oncology nursing experience, racial and ethnic backgrounds, geography of practice sites, and type of oncology research participation, continued this important tradition by developing ONS's 2024–2027 Research Priorities through an iterative process formulated from multiple data sources.

Research priorities for any organization are foundational and important for many reasons (Grill, 2021). The research priorities help to define an organization, reflecting the organization's values, mission, and goals. The research priorities can also serve as a guidepost document for the funding mission of the organization. For ONS, the research priorities are foundational across the ONS Enterprise, inclusive of the member organization (ONS), the philanthropic corporation (Oncology Nursing Foundation), and the credentialing corporation (Oncology Nursing

Certification Corporation). Subsequently, this procedure of frequently reassessing and reestablishing priorities highlights the distinctive organizational contributions made by ONS as it actively contributes to shaping the national cancer research agenda.

Thoughtful research priorities not only reflect current practice but also take into consideration the evolution of the specialty and help to orient an organization to the future (Viergever et al., 2010). When establishing priorities engages the organization's stakeholders, the priorities can build trust and engagement with the organization's constituency (Grill, 2021). In the case of ONS, the stakeholders include patients with cancer, their families, and their communities, as well as the membership, leadership, and funders.

Landscape Analysis

Before developing the current research priorities, the authors conducted a landscape analysis and examined previous ONS research priorities. Former research priority documents, focusing on the most recent priorities established in 2019, were reviewed (Von Ah et al., 2019). The 2021 updates created in response to the COVID-19 pandemic (Zanville et al., 2021) and national events related to racism, discrimination, and cancer disparities (Jones et al., 2021) were also reviewed.

The ONS research priorities needed to be established in the context of other national cancer care organizations. The national research priorities from all cancer care organizations provide context and information regarding current trends and funding opportunities outside of the Oncology Nursing Foundation, and they help to inform the significance for new priorities. In addition, the identification of research gaps helps to illuminate the role of ONS within the specialized domain of broader cancer research. All organizations funding cancer research or understood to be thought leaders in the cancer care landscape were assessed for their most recent research or, more broadly, organizational priorities. The priorities were structured according to topic (American Association for Cancer Research, n.d.; American Cancer Society, n.d.; American Nurses Association Enterprise, 2023; American Society of Clinical Oncology, 2021; Coats et al., 2023; Livestrong, n.d.; Multinational Association of Supportive Care in Cancer, n.d.; National Cancer Institute, 2019; National Institute of Nursing Research, 2022; Patient-Centered Outcomes Research Institute, n.d.) (see Table 1).

This crosswalk of research priorities helped to illustrate distinct areas of oncology research as well as highlight ONS's unique contribution to the national cancer research agenda. In collaborative efforts, ONS joins almost every other research organization in prioritizing cancer disparities and health equity, community support, and a focus on specific populations (e.g., underrepresented, low income, rural, refugee, immigrant) for assessment of cancer care outcomes.

The distinctive area of ONS research is precision symptom science. Although various organizations emphasize personalized, precision cancer therapy, ONS stands out for prioritizing a precision approach to symptom science, incorporating personalized assessment and management. ONS and the Multinational Association of Supportive Care in Cancer are the only organizations with a stated priority focusing on symptom science.

Stakeholder Survey

The landscape analysis served as the foundation for establishing research priorities, culminating in the development of a comprehensive stakeholder survey targeting oncology nurses, nurse scientists, and funders. Spanning September 18 to October 18, 2023, this survey sought to gauge perceived research priorities within the field. Respondents were tasked with ranking a list of potential topics according to their perceived importance, utilizing descriptive statistics for result analysis. The outcomes are delineated in Table 2.

The survey also encouraged open-ended input to introduce additional topics and was subsequently analyzed through content coding. The top responses among the open-ended surveys were issues related to the oncology nursing workforce and the impact of the environment on cancer incidence and outcomes, more specifically climate weather emergencies on cancer care. Responses also indicated that the integration of palliative care into routine cancer care should be a research priority.

The Research Priority Team

A team of 14 individuals responded to posted invitations through ONS. They were selected and joined for an in-person meeting in Pittsburgh, Pennsylvania, from November 4 through November 6, 2023. The team reflected diversity in years of oncology nursing experience, racial and ethnic backgrounds, geography of practice sites, and type of participation in oncology research. To have the voice of patients and families reflected (Grill, 2021), two advocacy organizations, Livestrong and the American Cancer Society, were invited to send organizational advocates for team participation. The in-person meeting consisted of open-ended discussion, small group work, and iterative priority development.

Evergreen Statements on Oncology Nursing Research

Discussion points of the meeting included priorities related to oncology nursing research that transcended current healthcare trends, addressed the needs of the patient with cancer and family, and visualized the oncology nurse of the future. Instead of crosscutting themes utilized in previous research priority documents, evergreen statements were developed. Evergreen statements, used frequently in marketing and now applied to oncology nursing research, are declarations that convey timeless wisdom, universal truths, or fundamental principles that are foundational for oncology nursing science

TABLE 1. Research Priorities and Major Cancer Funding Organizations	
Research Priority	**Organization**
Prevention; healthy eating, active lifestyle (HEAL); and early detection	ASCO, NINR, NCI, ACS
Personalized, precision medicine	ASCO, HPNA, NCI, AACR, ACS, PCORI
Immuno- and targeted therapies	NCI, AACR
Cancer disparities and health equity: special populations (aging) community support	ONS, ASCO, HPNA, ANA, NINR, NCI, AACR, MASCC, ACS, PCORI, Livestrong, APOS
Supportive care and survivorship	ONS, ASCO, HPNA, NINR, NCI, MASCC, ACS, Livestrong
Psychosocial and spiritual needs	ONS, MASCC, APOS
Symptom management (specific symptoms)	MASCC
Big data and precision oncology, technology, informatics	ASCO, ANA, AACR
Patient education/health communication	HPNA, MASCC, PCORI, Livestrong
Patient–family–caregiver relationships	HPNA
End-of-life care	ONS, HPNA, NINR
Workforce issues	ONS, HPNA, ANA, APOS
Quality and safety	ONS, HPNA, ANA
Nursing education and professional development	HPNA, ANA
Ethical practice and patient advocacy	HPNA, ANA
Cancer biology and genetics, etiology	NCI, AACR, ACS
Pediatric oncology and palliative care	HPNA, NCI
Global cancer research	ASCO, HPNA, NCI
Disaster and emergency response	HPNA
Clinical trials	ASCO, AACR
Value in cancer care	ASCO
Health service research	ASCO
Translational research	AACR, PCORI, Livestrong
AACR—American Association for Cancer Research; ACS—American Cancer Society; ANA—American Nurses Association; APOS—American Psychosocial Oncology Society; ASCO—American Society of Clinical Oncology; HPNA—Hospice and Palliative Nurses Association; MASCC—Multinational Association of Supportive Care in Cancer; NCI—National Cancer Institute; NINR—National Institute of Nursing Research; ONS—Oncology Nursing Society; PCORI—Patient-Centered Outcomes Research Institute	

(Kappel, 2019). Evergreen statements are anticipated to remain relevant or true over time; they are not tied to a specific moment or context and continue to hold their meaning or validity regardless of changes in circumstances. These statements are not limited by temporal factors and can be applied broadly. Although the topics can be expanded for more specific, urgent research, ONS believes the 10 evergreen statements endorsed by the Research Priority Team are foundational to oncology nursing science and recognized as truths across all research endeavors. These evergreen statements establish a foundation for oncology nursing research, emphasizing the enduring importance of these topics. Although researchers must stay attuned to current scientific advancements and explore new questions and methodologies, the core issues will remain crucial. The ONS Research Priority Team consensually endorsed developing a standalone position statement to further clarify the evergreen statements. The 10 evergreen statements are as follows:

- Oncology nurse science includes all nurses, globally, at all levels. All oncology nurses and roles within oncology nursing are critical contributors to all aspects of the oncology research process.
- Oncology nurse scientists understand that the effects of cancer and cancer care on the family and caregivers must be recognized and are critical aspects of oncology nursing research.
- Oncology nurse scientists must continue to develop new knowledge. This is essential to advancing the specialty. The development and maintenance of oncology nurse scientists must be supported through mentorship, funding, and institutional support.
- Oncology nurse scientists are committed to equity, diversity, and inclusion in all oncology nursing research and science. All individuals, across the cancer continuum, regardless of race, ethnicity, gender, and geography (rural/urban), must be considered in the design and conduct of oncology nursing research and science.
- Oncology nurse scientists conduct research across the lifespan and the cancer trajectory. Their research incorporates prevention through healthy lifestyle, screening, and treatment; survivorship; living with advanced cancer; end-of-life care; and the bereavement period.
- Oncology nurse scientists value collaboration with key communities of interest, however that may be defined. Communities of interest must be considered in the ideation, design, execution, and dissemination of oncology nursing scholarship.

- Oncology nurse scientists recognize that clinical trials are critically important in advancing cancer knowledge and practice across the cancer care trajectory (e.g., inpatient, ambulatory, perioperative) and should be considered for all patients at every opportunity across the cancer care trajectory. Oncology nurse scientists must prioritize inclusive patient accruals, access, and support across all cancer clinical trials.
- Oncology nurse scientists are leaders of, and valuable contributors to, interprofessional research teams.
- Oncology nurse scientists fill knowledge gaps in understudied tumor types, heterogeneity in the selection of tumors, or tumor types in oncology nursing cancer research.
- Oncology nurse scientists recognize that research design in oncology nursing scholarships must be consistently updated and reflective of innovative methodologies.

Research Priorities

After the establishment of the foundational evergreen statements, the team identified five priorities in which new knowledge most urgently needs to be developed (see Figure 1). In consideration of the

TABLE 2. Ranking of Research Priorities

Research Priority	Weighted Rank
Health disparities	1 (729)
Symptom science	2 (666)
Care delivery	3 (590)
Community participatory research	4 (545)
Oncology nurse scientist development	5 (536)
Specific populations	6 (533)
Genetics/genomics	7 (494)
Optimal clinical education	8 (452)
Clinical trial recruitment	9 (402)

Note. Results are from the 2023 Oncology Nursing Society survey of stakeholders regarding research priorities. Respondents ranked a list of potential topics according to their perceived importance, and descriptive statistics were used for result analysis.

evergreen statements and the five research priorities, the socioecological framework was selected to frame the priorities.

Advance Patient-Centric, Precision Symptom Science

The prioritization of precision health approaches to symptom science underscores ONS's commitment to national leadership in cancer symptom science. Emphasizing precision health in cancer symptom science is imperative for advancing comprehension of debilitating cancer-related symptoms, particularly in the context of ever-evolving treatment options. This focus on precision symptom assessment and management incorporates a steadfast commitment to addressing standard oncology symptoms, such as fatigue, pain, and gastrointestinal toxicities, and other areas where oncology nursing scholarship has played a pivotal role in advancing symptom science (Berger et al., 2015; Cooley et al., 2023; McHugh & Miller-Saultz, 2011; Patrick et al., 2004). Historically, oncology nursing science and ONS have positively impacted cancer symptom science and practice. Descriptive work encompasses toxicities to new therapies (Biniakewitz et al., 2020; Reimschissel et al., 2017; Whisenant et al., 2021) across multiple populations (Leak et al., 2008; Lopes-Júnior, Bonfim, et al., 2016; Miaskowski et al., 2020). Symptom science research has also resulted in now established translational interventions (Bakitas et al., 2009; Chan et al., 2020; Chen et al., 2022; Ferrell et al., 2020; Henson et al., 2020; Keane et al., 2023; Lopes-Júnior, Olson, et al., 2016; Sheikh-Wu et al., 2020; Smith et al., 1994; Wu & Harden, 2015) developed by oncology nurse scientists to address multiple symptoms. These interventions have been used to improve patients' side effects and outcomes throughout the acute treatment phase (Chan et al., 2020; Lopes-Júnior, Olson, 2016; Sheikh-Wu et al., 2020; Smith et al., 1994), survivorship (Chen et al., 2022; Wu & Harden, 2015), and palliative and end-of-life care (Bakitas et al., 2009; Ferrell et al., 2020; Henson et al., 2020; Keane et al., 2023). Through the Putting Evidence Into Practice program, ONS then broadly disseminates this symptom management evidence to oncology nursing (Johnson, 2014), with benefits across multiple cancer symptoms.

The 2024–2027 research priority is to continue progress in understanding of symptom mechanisms and optimal interventional strategies by moving beyond the one-size-fits-all approach to precision symptom science. Precision approaches are more patient centric and allow a more comprehensive understanding of symptoms, their mechanisms, and

interventions (e.g., integrate co-occurring symptom clusters, translational research, biologic markers, and individual phenotypes into symptom science research) concerning the individual (Dorsey et al., 2019; Hickey et al., 2019). Specific examples of recent advances in precision symptom science relevant to oncology nursing include the following:

- Identification of symptom clusters: Research is uncovering distinct symptom clusters associated with individuals and specific cancer types or treatments, allowing for targeted interventions (Miaskowski et al., 2017).
- Machine learning models: Predictive models are being developed to identify patients at risk for specific symptoms, enabling proactive management (Levitsky et al., 2019).
- Biomarker identification: Biomarkers are in exploration to predict and personalize symptom management strategies (Miaskowski & Aouizerat, 2012; Page et al., 2018).
- Genomics: Understanding the genetic basis of symptom response is informing individualized treatment approaches (Fu et al., 2019; Grayson et al., 2023).
- Novel methods of patient-reported data: Mobile applications and other tools for patients to report symptoms in real time provide valuable data for personalized care (Fonseka & Woo, 2021).
- Multiomics approaches, encompassing genomics, epigenetics, metabolomics, and transcriptomics: These offer a comprehensive perspective of symptoms. Rather than relying on singular omics approaches, a multistage omics analysis leverages big data analytics to analyze multiple factors (Harris et al., 2021; McCall et al., 2018).

This analytical paradigm, although more complex than previous symptom science descriptive work, enhances understanding of real-world symptom incidence, severity, and effective mitigation strategies across the cancer continuum. This burgeoning science is a current priority.

In addition to biologic features, multiple other factors and approaches are critical to patient-centered, precision health approaches to symptom science. Evaluating symptom profiles and the efficacy of supportive care interventions tailored to specific patient demographic profiles and social determinants of health (SDOHs) provides a holistic analysis and risk assessment of the patient, their symptoms, and symptom mitigation strategies (Bona & Keating, 2022; Lyon, 2022; Venkataramany & Sutton, 2022; Von Ah et al., 2022). Combining multiple data sources including

omics, patient-reported data, and SDOHs creates large datasets. The utilization of these large datasets for analysis or to create predictive algorithms for precision symptom science requires artificial intelligence (AI) and/or big data approaches (Bakken et al., 2020; Keim-Malpass & Kausch, 2023). For oncology scientists to effectively explore both biologic/omics aspects and nonbiologic factors in oncology, scientists must either hone their proficiency in big data analytics and laboratory sciences or take the lead in interprofessional teams possessing expertise in these areas.

In recent years, oncology nursing has embraced precision symptom science, leveraging advancements to personalize symptom management for patients with cancer (Keim-Malpass & Kausch, 2023). With the creation of machine learning models, oncology nurses are shaping a future where tailored interventions based on individual biologic and psychosocial factors guide care. This personalized, patient-centric approach promises earlier symptom detection, targeted therapy selection, and, ultimately, improved quality of life for patients with cancer. This shift demands continuous skill development, but the potential to revolutionize symptom management makes it a worthwhile journey. By embracing precision symptom methodologies as a research priority, ONS positions itself at the forefront of innovative research that addresses the complexities of cancer symptoms through a holistic and patient-centered lens.

Provide Evidence for Safe and Effective Cancer Care Delivery Models and Support of the Oncology Nursing Workforce

As distant as 2013, the cancer care delivery system was declared to be in crisis due to a lack of patient-centric care, well-integrated palliative care, and evidence-based decision-making (Institute of Medicine, 2013). More than a decade later, with the cumulative and long-lasting stress of the acute COVID-19 emergency, health care—and specifically cancer care—remains vulnerable to poor quality care delivery (Broom et al., 2023; Schmidt et al., 2020; Spicer et al., 2020).

Workforce dynamics; cancer care delivery; chronic labor, supply, and medication shortages; and nuanced issues within cancer treatment administration are needed areas for oncologic scholarship. In the absence of robust evidence guiding careful, quality-oriented decisions, administrators face pressure to prioritize cost and workforce availability over safety and quality in cancer care delivery. This absence of evidence perpetuates an environment in cancer care delivery

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> **FIGURE 1. 2024–2027 Research Priorities of the Oncology Nursing Society**
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> - Advance patient-centric, precision symptom science.
> - Provide evidence for safe and effective cancer care delivery models and support of the oncology nursing workforce.
> - Describe the impact of the environment of cancer care outcomes.
> - Integrate patient navigation into cancer care across the trajectory.
> - Advance the use of innovative methodologies in oncology nursing research.

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characterized by an ongoing state of emergency without the benchmarks to assess the efficacy and safety of policies and procedures. The study of workforce, cancer care delivery, and specific issues in cancer treatment administration are areas of research that, in collaboration with clinical colleagues, represent important contributions to oncology scholarship.

The delivery of cancer care is rapidly changing without evidence as to its effectiveness in short- and long-term cancer care outcomes. The shift to more ambulatory cancer care delivery was driven by treatment evolution (e.g., improved supportive care, better-tolerated regimens, increase in oral agents) and financial factors (e.g., changing reimbursement models, costs of drugs) further accelerated by the pandemic (Laughlin et al., 2020).

The integration of telehealth services, providing a remote approach to healthcare delivery, has become a cornerstone of everyday cancer care. Although telehealth is celebrated for improving access to cancer care, the measurement of equity in telehealth accessibility, patient acceptance, and efficacy of short- and long-term cancer outcomes has not been rigorously evaluated (Royce et al., 2020; Shaffer et al., 2023; Xiao et al., 2023).

Numerous policies and practices in cancer care delivery, already challenged before the COVID-19 pandemic, changed without evidence in the face of the pandemic. These changes included nurse scope of practice, entry to practice, workflow, staffing, and the consideration of physical resources, such as medication shortages due to the supply chain. Solutions to the immediate crisis often conflicted with long-held standards of care regarding the safety and quality of cancer care delivery. With many of these issues remaining beyond the acute phase of the epidemic, the efficacy and quality of these solutions in cancer care remain untested.

There is a need for knowledge in multiple areas of cancer care delivery to base practice on sound evidence. These issues and the priorities include multiple questions around optimal nursing models, infusion administration in both outpatient and inpatient settings, management of oral anticancer agents, and the implementation of the "Hospital at Home" concept (Mooney et al., 2021) for delivering hospital-level care at home. Research around these issues, such as the reformation of team functioning and communication interventions for optimal cancer care delivery (Fauer et al., 2021; Liu et al., 2023), are examples of scholarship addressing these clinical issues.

The oncology nursing workforce shortage, immediate and future, is an additional component of this priority. The critical role of oncology nurses in achieving global cancer control goals, as well as the challenges and solutions related to the oncology nursing workforce, is evident in today's oncology specialty. Nursing shortages, recruitment barriers, increased rates of retirement, and workplace burnout are just some of the challenges facing the nursing workforce (Challinor et al., 2020; Medvec et al., 2023; Shulman et al., 2020).

In April 2023, the National Council of State Boards of Nursing reported that 100,000 nurses left the workforce between 2021 and 2023 and that more than 600,000 more intend to leave the workforce by 2027. As the profession faces these workforce changes, an additional research priority is the optimal valuation of preparation, transfer of experiential knowledge, mentorship, and supportive interventions specifically for the highly specialized field of oncology nursing recruitment and retention (American Society of Clinical Oncology, 2014). Although this is a research priority across all nursing specialties, the unique aspects of oncology nursing may have specific subspecialty implications for nurse recruitment, retention, and practice. This critical, and now chronic, nursing shortage calls for innovative strategies and the prioritization of workforce research to lead to robust implementation and evaluation plans.

Describe the Impact of the Environment on Cancer Care Outcomes

Three distinct environmental areas have been identified as research priorities for oncology nursing scholarship. The first is the study of individual-level exposures, including cumulative contact to stressors over the life course. The impact of broad-ranging environmental exposures extends from the micro (cellular) to macro (community) levels on cancer incidence and outcomes. The accumulation of exposures disproportionately affects individuals and communities of economic and social disadvantage, impacting overall health and leading to disparities in cancer incidence and outcomes (Nogueira & White, 2023; Nogueira & Yabroff, 2024). Examining prolonged exposure to environmental toxins, poverty, violence, and/or discrimination on susceptibility to cancer incidence, treatment response, and overall health outcomes is an important research focus. This research allows for not only an improved understanding of these risks but also the application of a biologic, mechanistic explanatory model.

A promising system of measurement of neighborhood or community influences on cancer care incidence or outcomes is the Area Deprivation Index, a composite metric 1 that considers multiple community characteristics based on census tract, including employment rates, education, and poverty. This can be easily obtained by the patient's home address (Markey et al. 2023; Starkweather et al., 2023). This metric is now utilized to analyze cancer disparities, including differential outcomes among patient populations from more highly deprived versus more affluent neighborhoods. These patients include men receiving treatment for prostate cancer, survivors of head and neck cancer, and patients with advanced cancers (Bai et al., 2023; Balogun et al., 2024; Burse et al., 2022; Coughlin, 2021; Fuemmeler et al., 2023; Rosenzweig et al., 2021).

For children and adolescents, the Child Opportunity Index, also based on census tract level, considers the quality of resources and conditions available to support healthy growth and development within a community (Ferrara et al., 2024). When used in cancer, the Child Opportunity Index can serve as an explanatory model for outcomes such as non-Hispanic Black and Hispanic children having increased odds of developing one or more life-threatening complications when hospitalized with cancer (Savage et al., 2023).

Further research to better understand and address the predictive nature of both area deprivation and neighborhood opportunities for patient outcomes is needed. This includes attention to potential biologic and epigenetic mechanisms associated with individual allostatic load (Mathew et al., 2021) and neighborhood deprivation (Ray et al., 2023; Shen et al., 2022), as well as effective interventions to advance equitable outcomes (Hong & Handley, 2022). The second needed inquiry into environmental impact and cancer outcomes is patient and community access to care in the face of climate-related weather emergencies (Man et al., 2018; Walker et al., 2020).

Climate-related emergencies and their impact on the ability to deliver seamless cancer care—including preventive services, diagnosis, and treatment without interruption or modification—are considerations of environmental factors that have emerged as a priority for oncology nursing scholarship. To provide this knowledge and advance science in this area, oncology nurse scholars can partner with health service researchers to systematically capture the care outcomes of those receiving cancer care when disrupted by weather emergencies, or with qualitative researchers to capture the patient's lived experiences of these emergency interruptions in care as well as the experience of drug shortages and other cancer care delays. These valuable data can formulate and ensure proactive plans and policy for patient protections in the face of future emergencies.

The third emerging consideration of environmental influences on cancer care outcomes, exacerbated during the COVID-19 pandemic, is the exposure of patients, families, and communities to misinformation regarding science and cancer (Costa & Friese, 2022; Jun et al., 2023; Swire-Thompson & Johnson, 2024). The sources of cancer information by which patients make treatment and supportive care decisions should be understood in relation to the individual's environmental and SDOHs. Far beyond the COVID-19 vaccine controversy, disinformation—and the acceptance and adoption by patients, families, and clinicians of nontraditionally researched information—is a new clinical challenge without evidence on which to guide interventions. Research is needed regarding the information sources, impact, and potential harm of misinformation and its impact on cancer prevention, screening, treatment choices, and adherence. Personalized patient preference for information and trusted sources of cancer information must be understood (Johnson et al., 2022). Prescriptions and/or quality information checklists for accurate, trustworthy information sources could be tested (Loeb et al., 2024). This is an understudied but important topic with strong clinical application.

Integrate Patient Navigation Into Cancer Care Across the Trajectory

With the recent advent of reimbursed cancer navigation services to address SDOHs serving as cancer care barriers (Asprias, 2023) and clearly defined standards for oncology navigation preparation and practice (Franklin et al., 2022), the implementation and sustainability of patient navigation in cancer care requires new exploration. Research is needed to determine the type and dose of cancer navigation services offered, as well as the optimal manner in which navigation can be implemented into vulnerable patients and communities within cancer care (Bernardo et al., 2019; Lent et al., 2023). Conversely, the impact of available reimbursement on the use and outcomes of navigation services across a broad range of cancer care delivery settings and the cancer continuum (treatment, survivorship, end-of-life care) and for multiple cancer types must be documented (Paskett et al., 2023). Navigation for specific supportive services such as accessing community resources, financial navigation, symptom management, and end-of-life care must also be considered and evaluated.

Solid evidence on what cancer care navigation should be based is needed. This evidence must come from well-designed research addressing the "who" (e.g., nonclinical nurse navigator, social worker, financial navigator, end-of-life doula) and their optimal preparation and the "what" (type of interventions) needed to achieve the specific outcomes desired. The optimal outcomes must be defined, and appropriate and rigorous measurement must be applied to determine the appropriate navigation prescription in accordance with individual patient needs (Paskett et al., 2023). For example, measurable modifiable outcomes could include known outcomes such as adherence to appointments and treatment completion but also financial toxicity, symptom management/symptom burden, and psychosocial factors.

Advance the Use of Innovative Methodologies in Oncology Nursing Research

The fifth research priority focuses on advancing the use of innovative methodologies used in oncology nursing research. It is imperative for scientists to continually enhance their methodologic tool kit to effectively address emerging challenges. Embracing progressive methodologic approaches is essential for enhancing the overall landscape of cancer care. This is particularly true for oncology nursing scholarship to cover the breadth and depth of oncology research. Specifically, current important methodologic trends are big data analytics, the use of AI in research design and methodology, community participatory research, and implementation science methodologies.

Rapidly expanding technology is leveraging patient data to shape predictive and prognostic algorithms, defining care pathways, and illuminating

more efficient care patterns. The utilization of big data and AI, including natural language processing and medical record analysis, holds tremendous potential in uncovering insights that can utilize large datasets for predictive capability (Bakken et al., 2020; Keim-Malpass & Kausch, 2023). Research priorities around these potential applications are diverse, encompassing algorithm development for optimal cancer treatment, symptom management, quality care aligned with patient goals, optimal workflow, and equitable care through the thoughtful integration of available social demographics of health to predict patient vulnerability (Mema & McGinty, 2020; Shreve et al., 2022). In addition, generative AI, or "chatbots," derived from large language models, will not only influence clinical care as it becomes more precise and sophisticated but also open exciting new directions for the numerous oncology nursing research trajectories based on developing accurate and trustworthy patient counseling, education, and support (Iannantuono et al., 2023; Kolla & Parikh, 2024).

Integrating newer research methodologies into older ones provides a full spectrum of potential approaches (a complementary toolbox) from which oncology nurse scientists can adapt and implement into their research. Particularly for scientists working in underresourced academic or clinical areas, this collaboration may require interprofessional research teams to gain access to expertise in all of these rapidly evolving fields. "Old school" research methodologies, including traditional intervention delivery methods (e.g., telephone, mail), are still needed, especially for underresourced or older patient populations.

Community-based participatory research (CBPR) represents a research paradigm shift, introducing a collaborative dimension that may be challenging for clinic- or institutionally based researchers. This methodology entails active engagement of both researchers and the community of interest throughout the entire research continuum, from the formulation of research questions to the design, implementation, and dissemination of results back to the community. CBPR emphasizes seeking and utilizing local knowledge, perspectives, and lived experiences so that research outcomes are contextually relevant and applicable (Meade et al., 2011). The community of interest may involve a community in a traditional sense, and specifically in cancer care may involve a specific patient population or cancer survivors. Examples are outlined in Glaser et al. (2023), which describes community–

academic partnerships for breast health equity. Oncology nurse researchers, in collaboration with communities of interest, can utilize this important methodology to better understand areas of community priority. An important consideration in CBPR is the time and community commitment necessary for a meaningful partnership. This additional time holds implications for funding paradigms and academic promotion metrics.

Lastly, the incorporation of implementation science methodologies as an important development in the creation of impactful science ensures the seamless integration of evidence-based practices into real-world healthcare settings, fostering the translation of research findings into tangible improvements in cancer care (Mitchell & Chambers, 2017). This integration of implementation science into oncology research is needed for all the research priorities. Implementation science also provides a canvas by which the rapidly growing number of DNP-prepared nurses can work with PhD scientists to further oncology nursing science. In essence, the fifth research priority creates opportunities for a dynamic, collaborative framework to advance the field of oncology nursing research.

Pickler (2024) questioned the essence of nursing science, deliberating that individual research ideas, projects, and trajectories can lead to siloed work focusing on the project and researcher, rather than on the collective science of nursing. Pickler (2024) defines nursing science as "that which is beneficial to human health and well-being and comes from an understanding that human complexity is best understood from a holistic perspective that takes into account multiple influencing contexts" (p. 1).

If oncology nursing adopts this broad definition, it is necessary to define and focus the pursuit of knowledge in accordance with the highest priority areas. Setting research priorities is an important exercise in reaffirming commitment to overall nursing, and specifically oncology nursing science. Although individual projects and the development of investigators' resumes are the methodologies through which research is conducted, the common goal is to advance science. The prioritization process helps oncology nursing scientists build on past accomplishment while focusing on the development of new, prioritized oncology nursing science.

Establishing research priorities sets the direction for the organization's research efforts. This holds implications for funding, student mentorship, and decisions regarding research trajectories on which to

embark. The establishment of research priorities is an important and clarifying exercise.

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