
EDUCATIONAL PREPARATION OF NURSES CARING FOR OLDER PEOPLE WITH CANCER: AN INTERNATIONAL PERSPECTIVE

JACKIE BRIDGES, YVONNE WENGSTRÖM, AND DONALD E. BAILEY JR

OBJECTIVES: *To review the education available in Europe and the US for nurses caring for older people with cancer.*

DATA SOURCES: *Nursing literature, published guidelines, and professional nursing organizations Websites.*

CONCLUSION: *The educational needs of nurses caring for older cancer patients have not been well defined to date, resulting in a mixed international picture of preparation.*

IMPLICATION FOR NURSING PRACTICE: *As the number of older people with cancer grows, the resulting complexities of patient and family care needs have significant implications for the role of nursing.*

KEY WORDS: *gero-oncology, nursing education, nursing practice, aged, oncology nursing, education.*

Jackie Bridges, PhD, MSN, BNurs(Hons), RN: *Professor of Older People's Care, Faculty of Health Sciences, University of Southampton, UK.* Yvonne Wengström, OCN™, PhD: *Professor of Nursing, Division of Nursing, Karolinska Institutet and Department of Oncology, Karolinska University Hospital, Sweden.* Donald E. Bailey Jr., PhD, RN, FAAN: *Associate Professor of Nursing & Claire M. Fagin Fellow, Duke University School of Nursing, Durham, NC.*

Address correspondence to Jackie Bridges, PhD, MSN, BNurs(Hons), RN, Faculty of Health Sciences, University of Southampton, Nightingale Building, Highfield Campus, Southampton SO17 1BJ, UK. E-mail: jackie.bridges@soton.ac.uk

© 2016 Elsevier Inc. All rights reserved.
0749-2081

<http://dx.doi.org/10.1016/j.soncn.2015.11.003>

Cancer is a major health challenge for older people. Nurses have a critical role in maintaining optimal health and quality of life for older people and families through their cancer journey. However, insufficient attention has been given to the development of a nursing workforce that is able to provide this support. Ensuring the “right staff, right place, right time, right skills” with the growing needs of an ageing population have created a global crisis in the health workforce across health care specialties, including oncology.¹ Education is an important part of the solution to this crisis, but there is a lack of agreement as to how nursing should meet these

challenges. This article reviews educational opportunities for nurses in Europe and the United States and provides recommendations for the nursing workforce to develop further competencies in caring for older people with cancer.

Older adults with cancer are more likely to have comorbidities and other problems associated with their age, such as dementia, depression, stroke, diabetes, and problems related to continence, nutrition, risk of falls, functional decline, polypharmacy, and delirium,² which may affect their response to treatment, the need to modify their treatment plan, and the supportive care that is needed. Older adults are a heterogeneous group and require a comprehensive assessment to tailor their treatment and plan of care. Their families are also more likely to need psychosocial support during and perhaps beyond the cancer treatment trajectory.³⁻⁵ Nurses play a leading role in ensuring that these elements of care are in place. However, they require skills and knowledge of common clinical issues that occur in old age to enable them to help the patient and family develop goals for treatment, care, and quality of life. Education should include knowledge of cancers common in older patients including breast, prostate, gastrointestinal, and lung, the pathophysiology of these cancers, review of common chemotherapy regimens, and evidenced-based nursing interventions for older patients and families.⁶

There is a need to consider the educational needs of specialist nurses working with older patients with cancer because they will most likely provide support to people with the most complex needs. However, there are few examples internationally of nurses working in a specialist gero-oncology capacity. In France, for instance, the concept of specialist geriatric oncology clinics and the key role of specialist nursing in care and support of older cancer patients are well established in a number of centers. In the UK and Sweden, the nurse specialist role tends to be defined by tumor type, and so services, including nursing, that focus specifically on older cancer patients, are a rarity. In African countries, there is little public or professional awareness of the issues related to the older adult with cancer, and specialist services have not been developed.⁷ Internationally, nursing has a role to play in the provision of specialty services but the gerontological nursing specialist role for the older cancer patient has not been well defined to date.

With regard to educational provision, gerontological nursing and oncology nursing have tended to be taught separately from each other both in un-

dergraduate and graduate programs. Given that there are existing concerns about a lack of consistent undergraduate education focused on either of these fields, it is likely that pre-licensure nursing students may not be exposed to the need for the integration of skills and knowledge from both fields together.⁸⁻¹⁰ In continuing education, there is greater potential for an integrated approach and the development of specialist roles that encompass oncology and gerontology. However, this review identified limited educational provision that specifically supports nurse specialist roles in gero-oncology. In Europe, there are some specific postgraduate courses ranging from 2- to 3-day courses to full tertiary programs with diplomas, targeted at a range of professionals including nurses.⁷ There are also some online resources freely available on the Internet and targeted at health care professionals.¹¹ In the US and a few other countries, as detailed below, nurses working in organizations registered with the Nurses Improving Care of Health System Elders (NICHE) program, can access educational resources on nursing older people with cancer. However, these resources are not available across the nursing workforce and a lack of published research means it is not known if nurses access them and, if they do, their impact on nursing practice. Given that gero-oncological nurse specialist roles are relatively rare, it is perhaps not surprising that educational provision in this field of nursing is in its infancy.

The following sections review examples from Europe and the US that discuss positive changes in nursing education and care for older patients with cancer.

EUROPE

In many European countries, the role of nursing in gerontological oncology care is well recognized by patient groups and specialist teams. However, workforce planning within health services often neglects the skill and education required to provide such support for patients with cancer and their families.¹² Cancer care is becoming more complex with the changing and increasing complexity of comorbid conditions, which is demanding a wider range of skills and critical thinking among nurses working in gerontological oncology.¹³ Social and economic pressures are also influencing education in Europe with the move of nursing pre-licensure courses into higher education.¹⁴ A range of key

influencing factors in Europe are creating a climate in which investment in nursing education in gerontology nursing is increasingly recognized as important, but remains hard to fully implement.

The Harmonization of European Nursing Education

A number of features of nursing education in Europe are relevant to the way in which educational provision has been shaped. Academic credits and quality assurance guidance reflect the Bologna agreement, which introduced the harmonization of educational levels across Europe.¹⁵ This agreement prompted the development of a common, three-tier system of bachelors, masters, and doctoral degrees. A common European Credit Transfer System, allows learners to combine studies at different European centers to develop their professional qualifications. These are now well recognized within some parts of Europe and have clearly put a focus on the joint development of curricula in nursing education.¹⁵ However, in a context of constrained public finances, nurses are finding it increasingly difficult to get time for or funding to allow further continuing professional development within many European Union (EU) academic institutions.^{16,17}

As in other parts of the world, health care in Europe is shifting rapidly in response to technological and scientific innovations, in addition to rising consumer expectations. Reform of health services is a common phenomenon, but these reforms are often implemented rapidly with little consideration of workforce implications. As a consequence, a constantly developing and flexible nursing workforce is required.^{18,19} In many countries, the supply of nurses does not match the demand of services on the nursing workforce. In Europe, the current number of nurses being educated is not offsetting the number of nurses retiring and in Italy, for example, there is a shortage of nurses. Unfilled specialist training places are also found throughout the EU. Other professions seem more attractive in Sweden France, and Hungary.¹⁶

European Influence on Cancer Nursing Education

There have been a number of positive efforts to improve the EU climate for nursing education in relation to older adults living with cancer. Political imperatives to improve the care of older adults through EU directives (guidelines) include the healthy ageing program and long-term care for the

older adult, which have provided additional incentives for nurses and other health care professionals to improve their gerontological knowledge. Other mechanisms have provided incentives for improvements in cancer care in general. For instance, the EU Commission (the EU's executive body) recently called for action to reduce inequalities in cancer outcomes in Europe.²⁰ The vital role of the different professions, with a focus on nursing in the provision of cancer therapy, rehabilitation, and end-of-life care, was highlighted in this call for action.

International Society of Geriatric Oncology

The International Society of Geriatric Oncology is a multidisciplinary society that aims to foster the development of health professionals in the field of geriatric oncology to optimize treatment of older adults with cancer. Through its work, the International Society of Geriatric Oncology has played a part in the development of the role of nursing in the European context, resulting in the development of the Nursing and Allied Health Professional Group in 2014. The purpose of this group is to develop and nominate excellence in geriatric oncology nursing through education, clinical practice, research, and advocacy. This is a rather new initiative and, to date, its effects can mainly be seen at the annual conference, with the development of special interest sessions.²¹ On the International Society of Geriatric Oncology Website there are a number of educational resources targeted at clinicians working with older people with cancer.¹¹

European Oncology Nursing Society

Another example of a positive initiative in Europe is the European Oncology Nursing Society Cancer Nursing Curriculum that provides eight modules that can be taken over a single period of 40 weeks. The curriculum, currently under review, is designed as a framework for future educational development, and European Oncology Nursing Society members are advised to adapt it as necessary to meet their own professional needs for cancer nursing within their own country. In addition, guidance on supervision of practice, training facilities, and quality assurance requirements are also provided in the curriculum. One module focuses specifically on cancer in older adults.²² As illustrated in [Table 1](#), the key domains highlighted are context of care; impact of cancer on people and their families, including survivorship; cancer pathology and treatment; nursing assessment and intervention, including symptom

TABLE 1.
Modules in European Oncology Nursing Society Curriculum for cancer in older people²²

- The context of care in older people: to encourage the student to analyse the impact of cancer in an ageing society in a national and European context
- Impact of cancer on older people and their carers: to provide the student with an understanding of the impact of cancer on older patients and their informal carers
- Basic science and treatment of cancer in older people: to provide students with a basic understanding of how cancer develops in older people and the factors that contribute to cancer development in the older host
- Nursing assessment and intervention in older people: to provide the student with the knowledge and understanding to assess the multidimensional needs of older people with cancer
- Decision-making and communication: to provide the student with the skills required to communicate effectively, respectfully, and compassionately with older people with cancer and their families

management and end-of life care; and decision making and communication. The module provides a useful reference point for individual nurses seeking to assess their competency in caring for older cancer patients, but also for educational providers and their funders to plan the development of suitable provision.

This specialist module has made an impact on learning resources and provided guidance for structuring the learning content of educational programs across several European countries. This impact has been strengthened in particular by the provision of support for translation of the curriculum as part of the package.^{22,23} Future development of new specialist curricula and advancing levels of practice through consensus and expert panels identify these curricula as a gold standard of professional education across Europe.

UNITED STATES

In the US, gerontological content has been widely integrated within the curriculum of schools awarding the baccalaureate degree in nursing; this has been driven by the work of the national Geriatric Nursing Education Consortium (GNEC) (see below). Berman et al.²⁴ reported a significant increase in gerontological curriculum content (63% vs 92%) between 1997 and 2003. While this study has not been updated, findings from a 2014 evaluation of

the impact of the GNEC reported that of 344 participating schools, 281 (81.7%) had updated or enhanced their senior-level nursing courses by adding evidenced-based geriatric content.²⁵

However, there are few schools of nursing offering an oncology course for baccalaureate students. Erickson et al.²⁶ found that key oncology concepts and evidenced-base care about cancer nursing are taught in adult health nursing courses and clinical rotations. A recent national survey sought to identify the key cancer concepts taught in US nursing programs.²⁷ Review of major cancers and goals of cancer treatment ranked high (3.67 and 3.64 on a scale of 0 to 5), whereas sexuality and scope and standards of oncology nursing ranked lower (3.1 and 3.0). They also identified a lack of time within the curriculum and limited access to resources as significant barriers to teaching oncology content.

The National Comprehensive Care Network provides guidelines for the care of older adults with cancer as essential education for nurses and other health care professionals. These can be accessed at their Website.²⁸ A number of professional health care organizations (nursing, medicine, and foundations focused on health) have made important contributions to preparing registered nurses to care for older adults, including those diagnosed and living with cancer. Their contributions are described below.

American Association of Colleges of Nursing

The American Association of Colleges of Nursing is dedicated to setting standards and providing resources that advance nursing education, research, and practice. Through the Essentials Series, the American Association of Colleges of Nursing provides guidelines for curricula in baccalaureate schools of nursing. With the support of the John A. Hartford Foundation, they have also created a supplement of baccalaureate competencies and curricular guidelines for the nursing care of older adults.²⁹ The document follows the format of The Essentials of Baccalaureate Education of Professional Nursing Practice³⁰ adding gero-competency statements to each of the nine essentials. The document contains a list of Websites and resources, some of which offer oncology-specific information. While the guidelines focused on the care of older adults are now more than 5 years old, the Websites identified as resources for schools of nursing and nurses are updated on an ongoing basis.

TABLE 2.
National Gerontological Nursing Association (NGNA)
Recommendations for Pre-licensure Registered Nurse
programs (Diploma, Associate, and Baccalaureate)

- Recommendation 1: Develop program outcomes and curricula that incorporate the recommended Baccalaureate Competencies and Curricular Guidelines for the Nursing. Care of Older Adults (2010) for teaching gerontological nursing evidence-based practice across didactic and clinical courses
- Recommendation 2: Integrate gerontological nursing learning experiences into inter-professional education opportunities for students across disciplines
- Recommendation 3: Explore strategies for students to minor or specialize in gerontological nursing, such as option for internships or honors programs
- Recommendation 4: Faculty teaching in pre-licensure programs (Diploma, Associate, Baccalaureate, Master's) will maintain current preparation and expertise in nursing care of older adults for the courses involving gerontology and to seek national certification in gerontological nursing
- Recommendation 5: All practicing nurses who provide care for older adults in the US will participate in annual gerontological nursing continuing education to maintain and enhance competence

Reprinted with permission from the National Gerontological Nursing Association.³¹

National Gerontological Nursing Association

The National Gerontological Nursing Association represents clinical nurses, educators, and researchers focused on the care of older adults across the continuum of care settings. Through an annual convention, state chapters and Webinars, the association seeks to improve the care provided to older adults. In 2015 the National Gerontological Nursing Association issued a position paper focused on gerontological nursing education in nursing programs (diploma, Associate, and Baccalaureate) and continuing education programs.³¹ The document makes five important recommendations for nurse educators that prepare registered nurses in all programs and these are shown in [Table 2](#).

John A. Hartford Foundation

Nursing care of older adults in the US has been significantly enhanced through the longstanding commitment of the John A. Hartford Foundation. They have supported the Hartford Institute for Geriatric Nursing to include NICHE, the program formerly known as the Building Academic Geriatric

Nursing Capacity Program and the Geriatric Nursing Education Consortium.

With the support of the foundation, New York University began to test nursing care models in the hospital setting in 1992. This project, now known as NICHE, was intended to improve the care environment for older adults by focusing on nursing practice. NICHE, now based at the New York University College of Nursing, helps hospitals in the US, Canada, Bermuda, and Singapore improve care for older adults. Their mission is to provide guidelines and tools to change the culture of care for older hospitalized adults. There are currently more than 620 hospitals and health care agencies participating in the program. They also provide important and specific educational content related to the nursing care of older adults with cancer.³²

The Foundation's Trustees approved funding for the Building Academic Geriatric Nursing Capacity Program in 2000. The goal was to fund up to 10 pre-doctoral scholars and 10 post-doctoral fellows annually;³³ funding has continued through 2015 with more than 200 scholars and fellows receiving support. While the focus was on the development of gerontological nurse scientists, educators, and leaders, their impact on undergraduate nursing education has been significant. In a 2011 evaluation brief, the Foundation reported that scholars and fellows had taught more than 11,000 undergraduate nursing students in courses that contained at least 50% gerontological content.³⁴ Another important function of these scholars and fellows has been the dissemination of research findings that support best education, practice, and innovation in care of older adults.

To further support gerontological nursing education at the baccalaureate level, in 2005 the foundation awarded a \$2.48 million grant to the American Association of Colleges of Nursing.³⁵ The Hartford Institute for Geriatric Nursing, housed at the New York University College of Nursing, was responsible for coordinating the activities of GNEC. Specifically, GNEC focused on the following four goals: 1) increase gerontological content in senior level nursing courses; 2) educate faculty in US baccalaureate schools on basic gerontological nursing and the use of available resources; 3) support trained faculty in their schools of nursing as they revise curricula and work to improve gerontological nursing education; and 4) provide faculty with innovative resources to help educate their students. These goals were accomplished through the participation of more than 800 nursing faculty from

every state in the US in six, 2-day Faculty Development Institutes. Participating faculty shared materials with colleagues who have used these materials to revise their courses. Importantly, the series contained a paper entitled “Assessment and Management of Cancer Related to Older Adults with Complex Care Needs.” The module remains a useful tool for the preparation of nursing students and all of the materials are available on the ConsultGeri Website.³⁶

American Nurses Association

The American Nurses Association (ANA) has a Web-based program entitled the *Nurse Competence in Aging* that is focused on “enhancing the geriatric competence – the knowledge, skills and attitudes – of the 400,000 nurses who are professionally identified as members of approximately 55 specialty nursing” including the Oncology Nursing Society.³⁷ The site has links to these specialty organizations, gerontological certification, and the ANA GeroNurseOnline Website.³⁸ The ANA has also developed the document *Scope and Standards of Practice for Gerontological Nursing*.³⁹ These standards provide specific criteria for basic gerontological practice of registered nurses. The American Nurses Credentialing Center, a subsidiary of ANA, offers a gerontological nursing board certification for registered nurses.

Oncology Nursing Society

The US equivalent of the European Oncology Nursing Society, the Oncology Nursing Society (ONS) is a member-based organization that served nearly 120,000 oncology nurses in 2014 through evidence-based education programs designed to enhance the treatment and care for patients with cancer and their families. Through the Society’s online resource center, annual Congress, regional

meetings, local chapters, ONS Communities, and the Oncology Nursing Certification Corporation, nurses can access oncology content that prepares them to provide evidence-based care for older adults. In 2011 ONS published a position statement *Lifelong Learning for Professional Oncology Nurses* that identifies the expected professional behaviors for oncology nurses to continuously update their skills and contribute to the education of nurses and other members of the health care team. ONS is currently revising their Standards of Oncology Nursing Education: Generalist and Advanced Practice Levels. These standards are provided to “enhance the quality of oncology nursing education and promote the standardization of oncology nursing academic preparation.” These materials are available on the ONS Website.⁴⁰ The Oncology Nursing Certification Corporation, an independent affiliate of ONS, offers certification for both US and international nurses and more than 37,000 are currently certified by this program.⁴¹ Coleman et al.⁴² found that nurses certified in oncology had higher levels of knowledge related to pain and followed guidelines for managing chemotherapy-induced nausea and vomiting more than non-certified nurses. These findings support the benefit of certification on patient care outcomes.

CONCLUSION

Those at the frontline of nursing education face many challenges in cancer education and the skills needed by oncology nurses for the future. In addition to improving nursing curriculum in geriatric oncology nursing, nurses must further define their role and competence in providing complex care to older adults with cancer.

REFERENCES

1. Buchan J, Campbell J. Challenges posed by the global crisis in the health workforce. *BMJ* 2013;347:1.
2. Department of Health. Cancer services coming of age: learning from the improving cancer treatment assessment and support for older people project. Macmillan Cancer Support, 2012. Available at: http://www.macmillan.org.uk/Documents/AboutUs/Health_professionals/OlderPeoplesProject/CancerServicesComingofAge.pdf. Accessed September 15, 2015.
3. Bailey C, Corner J, Addington-Hall J, et al. Treatment decisions in older patients with colorectal cancer: the role of age and multidimensional function. *Eur J Cancer Care* 2003;12:257-262.
4. Bailey C, Corner J, Addington-Hall J, et al. Older patients’ experiences of treatment for colorectal cancer: an analysis of functional status and service use. *Eur J Cancer Care* 2004;13:483-493.
5. Kennedy S, Bird L, Clarke A, et al. Improving support for older people looking after someone with advanced cancer. Nottingham: University of Nottingham; 2011.
6. Fraher E, Spetz J, Naylor M. Nursing in a transformed health care system: new roles, new rules. Robert Wood Johnson Foundation; 2015 Available at: <http://ldi.upenn.edu/brief/nursing-transformed-health-care-system-new-roles-new-rules>. Accessed September 15, 2015.

7. International Society for Geriatric Oncology (SIOG). The SIOG 10 priorities initiative. Available at: http://www.siog.org/index.php?option=com_content&view=article&id=218&Itemid=135. Accessed September 15, 2015.
8. Deschodt M, de Casterlé BD, Milisen K. Gerontological care in nursing education programmes. *J Adv Nurs* 2010;66:139-148.
9. Koskinen S, Salminen L, Stolt M, et al. The education received by nursing students regarding nursing older people: a scoping literature review. *Scand J Caring Sci* 2015;29:15-29.
10. Copp G, Caldwell K, Atwal A, et al. Preparation for cancer care: perceptions of newly qualified health care professionals. *Eur J Oncol Nurs* 2007;11:159-167.
11. International Society for Geriatric Oncology (SIOG). Education. Available at: http://www.siog.org/index.php?option=com_content&view=article&id=77&Itemid=72. Accessed September 15, 2015.
12. Ranchal A, Jolley M, Keogh J, et al. The challenge of the standardization of nursing specializations in Europe. *Int Nurs Rev* 2015;62:445-452.
13. Coleman MP, Alexe D, Albrecht T, et al. Responding to the challenge of cancer in Europe. Institute of Public Health of the Republic of Slovenia, 2008. Available at: http://www.euro.who.int/__data/assets/pdf_file/0011/97823/E91137.pdf. Accessed September 15, 2015.
14. Foubert J, Faithfull S. Education in Europe: are cancer nurses ready for the future? *J BUON* 2005;11:281-284.
15. Saltman DC, Kidd MR, Jackson D, et al. Transportability of tertiary qualifications and CPD: a continuing challenge for the global health workforce. *BMC Med Educ* 2012;12:51.
16. Wismar M, Maier CB, Glinos IA, et al. Health professional mobility and health systems. Evidence from 17 countries. European Observatory on Health Systems and Policies 2011. Available at: http://www.sfes.info/IMG/pdf/Health_professional_mobility_and_Health_systems.pdf. Accessed September 15, 2015.
17. European Federation of Nurses Association. Caring in crisis: the impact of financial crisis on nurses and nursing: a comparative overview of 34 European countries. European Federation of Nurses Associations, 2012. Available at: <http://www.efnweb.be/wp-content/uploads/2012/05/EFN-Report-on-the-Impact-of-the-Financial-Crisis-on-Nurses-and-Nursing-January-20122.pdf>. Accessed September 15, 2015.
18. Doran DM, Harrison MB, Laschinger HS, et al. Nursing-sensitive outcomes data collection in acute care and long-term-care settings. *Nurs Res* 2006;55:S75-S81.
19. Szecsenyi J, Broge B, Eckhardt J, et al. Tearing down walls: opening the border between hospital and ambulatory care for quality improvement in Germany. *Int J Qual Health Care* 2012;24:101-104.
20. European Commission. Commission staff working document on an action plan for the EU health workforce. Available at: http://ec.europa.eu/health/workforce/docs/staff_working_doc_healthcare_workforce_en.pdf. Accessed September 15, 2015.
21. International Society of Geriatric Oncology. SIOG nursing and allied health interest group. Secondary SIOG nursing and allied health interest group. Available at: http://www.siog.org/index.php?option=com_content&view=article&id=322&Itemid=203. Accessed September 15, 2015.
22. European Oncology Nursing Society (EONS). EONS Curriculum for cancer in older people. Brussels: EONS; 2006.
23. Extermann M, Aapro M, Bernabei R, et al. Use of comprehensive geriatric assessment in older cancer patients: recommendations from the task force on CGA of the International Society of Geriatric Oncology (SIOG). *Crit Rev Oncol Hematol* 2005;55:241-252.
24. Berman A, Mezey M, Kobayashi M, et al. Gerontological nursing content in baccalaureate nursing programs: comparison of findings from 1997 and 2003. *J Prof Nurs* 2005;21:268-275.
25. Gray-Miceli D, Wilson LD, Stanley J, et al. Improving the quality of geriatric nursing care: enduring outcomes from the Geriatric Nursing Education Consortium. *J Prof Nurs* 2014;30:447-455.
26. Erickson J, DeGennaro G, Goeke L, et al. Introduction to clinical oncology nursing for undergraduate students. Secondary Introduction to clinical oncology nursing for undergraduate students 2009. Available at: <http://www.nursinglibrary.org/vhl/handle/10755/164594>. Accessed September 15, 2015.
27. Lockhart JS, Galioto M, Oberleitner MG, et al. A national survey of oncology content in prelicensure registered nurse programs. *J Nurs Educ* 2013;52:383-390.
28. National Comprehensive Cancer Network. Available at: <http://www.nccn.org/>. Accessed September 15, 2015.
29. American Association of Colleges of Nursing and The Hartford Institute for Geriatric Nursing at New York University College of Nursing recommended baccalaureate competencies and curricular guidelines for geriatric nursing care. Washington, DC: AACN, 2010.
30. American Association of Colleges of Nursing. The essentials of baccalaureate education for professional nursing practice. Washington, DC: AACN; 2008.
31. National Gerontological Nursing Association (NGNA). NGNA: position paper on essential gerontological nursing education in registered nursing and continuing education programs, 2015.
32. Nurses Improving Care for Healthsystem Elders (NICHE). Nursing care of the older adult with cancer. Secondary Nursing care of the older adult with cancer. Available at: <http://www.nicheprogram.org/courses/141>. Accessed September 15, 2015.
33. Fagin CM, Franklin PD, Regenstreif DI, et al. Overview of the John A. Hartford Foundation building academic geriatric nursing capacity initiative. *Nurs Outlook* 2006;54:173-182.
34. Sofaer S, Firminger K. New growth: a decade of cultivating leaders in geriatric nursing. New York, NY: The John A. Hartford Foundation; 2011.
35. Wilson LD. The American Association of Colleges of Nursing's geriatric nursing education consortium. *J Gerontol Nurs* 2010;36:14-17.
36. Hartford Institute for Geriatric Nursing. [Consultgeri.org](http://consultgeri.org). Secondary [Consultgeri.org](http://consultgeri.org). Available at: <http://consultgeri.org/>. Accessed September 15, 2015.
37. American Nurses Association (ANA). About nurse competence in aging. Available at: <http://geronurseonline.org/MainMenuCategory/AboutUs/AboutNCA.aspx>. Accessed December 18, 2015.
38. American Nurses Association (ANA). GeroNurseOnline. Secondary GeroNurseOnline. Available at: <http://geronurseonline.org/>. Accessed September 15, 2015.
39. American Nurses Association. Gerontological nursing. Scope and standards of practice. Silver Springs, MD: Nursesbooks.org; 2010.

40. Oncology Nursing Society (ONS). Secondary. Available at: <https://www.ons.org/>. Accessed September 15, 2015.

41. Oncology Nursing Certification Corporation. About ONCC: fact sheet. Secondary About ONCC: fact sheet 2015. Available

at: <http://www.oncc.org/files/factsheet.pdf>. Accessed September 15, 2015.

42. Coleman E, Coon S, Lockhart K, et al. Effect of certification in oncology nursing on nursing-sensitive outcomes. *Clin J Oncol Nurs* 2009;13:165-172.
