



# Oncology nursing specialty across Latin America: struggle and achievements past and present

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**Background:** Latin America (LATAM) is a large region from Mexico to southern Patagonia in Chile and includes most islands in the Caribbean where Spanish is an official language. Efforts to address nursing specialization in the care of patients with cancer throughout the cancer continuum are described in narratives of oncology nursing struggles and achievements from eight Latin American countries.

**Methods:** Contributions by authors from Mexico, Costa Rica, Ecuador, Brazil and Chile are complemented by interview data (in Spanish by a bilingual medical anthropologist) to share the history and present status in the Dominican Republic, Peru and Argentina.

**Results:** We present stories of the pioneers of oncology nursing and a brief description of health systems in several of the included countries to show the disparate approaches towards cancer control and the context in which the oncology nurses work. We include key demographics and cancer data from the highlighted countries. We follow with descriptions of the formation and importance of oncology nursing associations/societies and share the history of oncology nursing education efforts, scopes of practice and recommendations for improvement in oncology nursing.

**Conclusions:** Despite the challenges, oncology nurse leaders across LATAM are determined to raise the standards of care with structured specialization education/training, and to create advanced practice oncology nursing roles. It is critical that the achievements of oncology nurses are nationally acknowledged and appropriately compensated by governments and national and local authorities. The future is now for oncology nursing to be recognized as a critical specialized healthcare workforce to effectively address the growing threat of cancer and to ensure optimal control of this public health crisis across the region.

**Keywords:** Latin America (LATAM); oncology; nursing; education; practice

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*“The diagnosis of cancer is devastating and has a big impact on the personal and family emotional sphere. Everyday life becomes unbalanced, and decision-making is linked to despair. The helping relationship grows to the extent of the approach, with the members of the health team, being more evident the presence of nursing professionals, who are present to intervene and promote adaptation behaviors, adopting positive and hopeful positions towards healing or consolidate towards opening to palliative care at the end of life.”—Merí Isabel Ordoñez Sigcho, Mgr. and Humberto Elizalde Ordoñez, PhD, Ecuador.*

## Introduction

This paper presents a brief history and current situation of cancer nursing across Latin America (LATAM) including adult and pediatric nursing perspectives.

## Background

Oncology nurse authors from Mexico, Costa Rica, Ecuador, Brazil, Chile, Peru, Argentina, and the Dominican Republic share the struggle and achievements to realize an oncology nursing specialization that responds, in the best possible way

with the available resources, to the patients and families' needs.

## Rational and knowledge gap

Although some publications on national oncology nursing in various countries across LATAM are available, many are in Spanish or Portuguese and describe current practices. The history of oncology nursing across LATAM is not well documented in the literature as a whole and is significant to understanding the development and status of this specialty in the region.

## Objective

The work presented here addresses a regional knowledge gap by describing LATAM oncology nurse pioneers, health systems, national oncology nursing associations and societies, specialty education and scope of practice in selected countries. The LATAM authors also offer recommendations for strengthening the specialty in their countries and across the region.

## Methods

Two primary authors are responsible for compiling contributions to this paper. The first is an independent consultant medical anthropologist with 5 years of experience collaborating in pediatric oncology and nursing, now adult as well. She is Colombian and bilingual in Spanish/English. The second is a pediatric oncology nurse, medical anthropologist, and independent consultant from the USA and bilingual in Spanish/English, who has 25+ years collaborating with oncology nurses across LATAM. Both primary authors are experienced qualitative researchers and female. The participants were either known to the second primary author personally from collaborations throughout the years (Mexico, Brazil, Peru, and Dominican Republic), or referred by another oncology nurse (Ecuador, Chile, and Argentina), and one was identified through a publication on the internet (Costa Rica). No nurse refused to participate in the paper (however, the original Costa Rican nurse had had to withdraw for personal reasons). Interviews with three nurses (Dominican Republic, Peru, and Argentina) were necessary because the nurses do not speak or write in English. These three interviews were conducted in Voice over Internet Protocol (VoIP) in Spanish by the first primary author and recorded with consent in the setting

### Highlight box

#### Key findings

- Oncology nursing across Latin America (LATAM) has an uneven history and state of development as a specialty. Oncology nursing associations/societies are conducting required advocacy and in some cases regulation of this specialization.

#### What is known and what is new?

- Limited publications about the history and development of oncology nursing across LATAM have been published and specifically in English.
- This manuscript offers local expert oncology nurse perspectives on the development of this specialty from pioneers until today in eight countries ranging from Mexico to Chile and one in the Caribbean. Extensive documentation and detailed descriptions of health systems, oncology nursing associations/societies, scope of practice, and recommendations for strengthening oncology nursing are presented.

#### What is the implication, and what should change now?

- Much has been achieved, and the number of oncology nurses has grown substantially. However, oncology nurses on the frontline and faculty recognize the on-going need for government recognition of the specialty and appropriate compensation, wider scope of practice, advanced practice nursing roles, increased local nursing research and financial support for such, and additional specialized training opportunities for staff oncology nurses.



Created with mapchart.net

**Figure 1** Map of Spanish- and Portuguese-speaking Latin American countries. red, Spanish; pink, Portuguese.

of the participant's choice. The first primary author chose initial quotations from the three interviews, and these were discussed with the second primary author for appropriateness and placement. All three interviewees approved their quotations and, together with the LATAM authors who submitted written sections, all approved placement of their text and the paper as a whole.

### Setting: LATAM

LATAM is a large group of 33 countries from southern North America to the southernmost part of South America and the Caribbean (1). However, only 19 of these countries are Spanish speaking (not including Puerto Rico, a US territory) and one (Brazil) is Portuguese-speaking (2). Spanish- and Portuguese-speaking LATAM (see *Figure 1*), have approximately 573 million inhabitants (Brazil has 215.7 million) (3,4) [see *Figure 2* for gross national income (GNI) rankings].

## Results

We begin with four pioneers of oncology nursing, one each from Peru, Costa Rica, the Dominican Republic and Argentina who began the drive to specialization in their respective countries and key events in the development of oncology nursing in the region (*Figure 3*). We follow with a description of various national health care system infrastructures and coverage for cancer care to provide the context in which oncology nurses are caring for patients with cancer. Next, we share the importance of oncology nursing associations throughout the region and the impact they have also made in specialization and advocacy. We continue with a description of the education and specialization training for and scope of practice of oncology nurses from several of the countries herein. We end with the authors' recommendations for a way forward with a description of what is possible from several of the frontline pediatric and adult oncology nurses who know their practice and countries best.

The information shared by these nurses shows both the similarities and differences in cancer nursing education, practice and opportunities. LATAM is a large region with many distinctions in history, culture, traditional health practices and nursing traditions, all of which influence how oncology nursing care is provided.

### Pioneers of oncology nursing

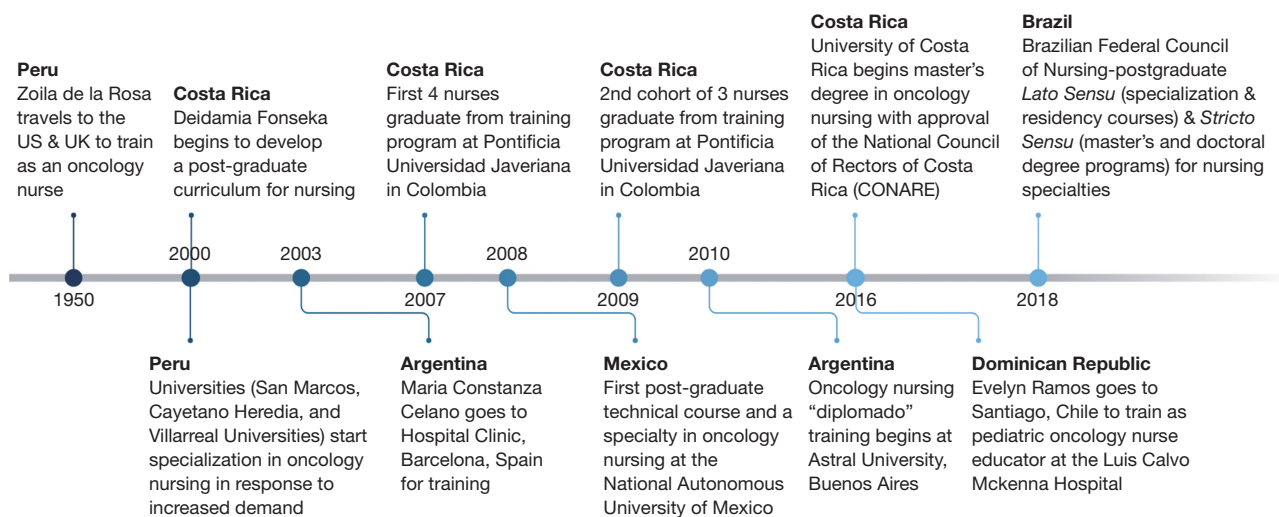
In many countries, the start of oncology nursing as a specialty was initiated by one nurse or a small group of nurses. In Peru, this pioneer was Ms. La Rosa. Melitta Cosme, PhD, Director of Nursing at the Instituto Nacional de Enfermedades Neoplásicas [National Institute of Neoplastic Diseases (INEN)] in Lima, Peru shares the following.

*“Ms. Zoila la Rosa, for me, is the pioneer of oncology nurses in Peru. She was the first nursing director at INEN. She did her training in the US and England in 1950. She spent a year in each place and brought us modern oncology nursing (...) Director Isabel Sánchez Linares also went to the USA to do her training specifically in chemotherapy. So, in one way, our directors (of nursing at INEN) were the pioneers of oncology nursing.”*

Gustavo Rodríguez Rodríguez, Historian of Costa Rica's Nurses College (CECR), speaks about nurse Deidamia Fonseca who set the foundation for oncology nursing to be a reality in Costa Rica. At the dawn of the XXI century, Deidamia Fonseca alongside an obstetrical



**Figure 2** Map of Latin America by World Bank Gross National Income per capita per year. World Bank. @worldbankdata. 2022. [cited 2022]. Available from: <https://blogs.worldbank.org/opendata/new-world-bank-country-classifications-income-level-2022-2023>.



**Figure 3** Timeline of key events in the Development of Oncology Nursing across Latin America.

nurse, and a psychologist, performed a diagnosis about oncological patients' situation in Costa Rica. The diagnosis revealed that there weren't any resources on oncologic nursing, nor a college graduate program on the topic. This prompted Deidamia to develop the pre-curriculum and curriculum at the Center of Strategic Development and Information on Health and Social Welfare (CENDEISS) and present it to the Board of Directors of the Costa Rican Social Security Fund (CCSS). This led to the authorization of an international postgraduate education budget for nursing professional.

In her interview, Evelyn Ramos, pediatric oncology nurse educator from the Dominican Republic, explained how she started oncology nursing in 2006 when specialization was not required for working in an oncology ward. To date, there is no specialization in oncology nursing in the Dominican Republic. She paid for (oncology) specialization herself because she liked the work.

*"I met Dr. Wendy García at INCART (National Institute of Cancer Rosa Emilia Sánchez Pérez of Tavarez) and we started the pediatric oncology service. At the time, I also worked at the (hospital) Robert Reid Cabral (...), in the newborn area, I was transferred to oncology and we met. With St Jude's (Children's Research Hospital in the US) support they sent me to Chile to do my training in nurse education. After that, I did my specialization at the University TECH in Spain."*

In Argentina, María Constanza Celano, an adult oncology nurse educator, describes her journey.

*"For us to be able to teach, we needed to have the specialization ourselves. I went to Catalunya at the Hospital Clinic in Barcelona for several months. I learnt a lot and I opened my mind (...). We took courses in clinical simulations, (and) we did several courses before we were ready to open the specialization (...) It was hard work before we were ready to accredit our training and the training of people who were going to teach (...) Our specialization originated from the need for (nursing) training in oncology."*

It is clear that like other nurses before them across the world, LATAM nurses identified a need for an oncology nursing specialty and these pioneers took action to make this a reality. These pioneers were critical to laying the foundation for the specialization.

### **LATAM healthcare systems**

LATAM has an increasing non-communicable disease burden causing significant mortality and straining healthcare systems and resources (5). There is a lack of cancer data, and a need to decentralize diagnostic services

while centralizing treatment to improve infrastructural challenges (6). The heterogeneity of healthcare systems, political instability, disrupted healthcare due to serious financial constraints, continued cancer stigma, cultural machismo (masculine pride), and misconceptions about curability all weaken public health support of patients with cancer (7). Despite these circumstances, strides are being made in healthcare systems to strengthen cancer control, particularly through oncology nursing capacity building and new laws to address access to cancer care. For a comparison of the focus countries' key demographics and health statistics, see *Table 1*. For examples of national laws addressing cancer treatment, see *Table 2*.

### **LATAM oncology nursing associations/societies**

LATAM oncology nursing associations/societies have been important stakeholders in providing a forum for shared action and advocacy for the profession with the community, in hospital settings, education and with the government (e.g., licensure). The following examples highlight the key role of oncology nursing associations/societies.

#### **Brazil**

The Brazilian Society of Oncology Nursing (SBEO) was founded on November 13, 1988 and aims to "establish a minimum mandatory core curriculum for training oncology nurses to map out and validate core competencies for advanced practice and to certify Specialists in Oncology Nursing" based on a certification test and criteria established by the SBEO Scientific Council and in accordance with professional legislation (8). The SBEO also "grant titles of Specialist in Oncology Nursing, based on the criteria established by the Scientific Council of SBEO and in accordance with current professional legislation" (8).

#### **Mexico**

According to Sosa and Salas [2015], since 1987, with the creation of the Association of Mexican Nurses in Oncology, the need to have expert professionals was determined (9). The first postgraduate technical course of Oncology Nursing was then created, and a specialty developed in 2008, and remains in force today at the Universidad Nacional Autónoma de México (National Autonomous University of Mexico or UNAM).

#### **Costa Rica**

Historically in Costa Rica, there were two ways of preparing

**Table 1** Key demographic and cancer statistics for Latin America

Country	Population <sup>†</sup>	Land mass square kilometers <sup>†</sup>	Ethnicities <sup>†</sup>	Life expectancy in years <sup>†</sup>	2022 cancer incidence overall (age standardized rate) <sup>§</sup>	% children <15 [2022] <sup>¶</sup>	% GDP spent on Healthcare <sup>⁵</sup>	Universal health care [2021] <sup>‡</sup>
Chile	18,430,408	756,102	White and non-indigenous 88.9%, Mapuche 9.1%, Aymara 0.7%, other indigenous groups 1% (includes Rapa Nui, Likan Antai, Quechua, Colla, Diaguita, Kawesqar, Yagan or Yamana), unspecified 0.3%	80.58	180.90	18%	9.33%	Yes
Dominican Republic	10,694,700 (2022 estimated)	48,320	Mixed 70.4% (Mestizo/Indio 58%, Mulatto 12.4%), Black 15.8%, White 13.5%, other 0.3% (2014 estimated)	72.56	172.40	27%	5.93%	Yes
Ecuador	17,289,554 (2022 estimated)	276,841	Mestizo (mixed Amerindian and White) 71.9%, Montubio 7.4%, Amerindian 7%, White 6.1%, Afroecuadorian 4.3%, Mulatto 1.9%, Black 1%, other 0.4% (2010 estimated)	77.51	154.60	26%	7.82%	Yes
Peru	32,275,736 (2022 estimated)	1,279,996	Mestizo (mixed Amerindian and White) 60.2%, Amerindian 25.8%, White 5.9%, African descent 3.6%, other (includes Chinese and Japanese descent) 1.2%, unspecified 3.3% (2017 estimated)	77.23	176.30	27%	5.22%	Yes
Costa Rica	5,204,411 (2022 estimated)	51,060	White or Mestizo 83.6%, Mulatto 6.7%, Indigenous 2.4%, Black or African descent 1.1%, other 1.1%, none 2.9%, unspecified 2.2% (2011 estimated)	80.75	188.70	20%	7.27%	Yes
Brazil	217,240,060 (2022 estimated)	8,358,140	White 47.7%, mixed 43.1%, Black 7.6%, Asian 1.1%, indigenous 0.4% (2010 estimated)	76.37	215.40	20%	9.59%	Yes
Argentina	46,245,668 (2022 estimated)	2,736,690	European (mostly Spanish and Italian descent) and Mestizo (mixed European and Amerindian ancestry) 97.2%, Amerindian 2.4%, African descent 0.4% (2010 estimated)	77.03	218.20	23%	9.51%	Yes

<sup>†</sup>, CIA Factbook: <https://www.cia.gov/the-world-factbook/countries>; <sup>§</sup>, World Population Review: <https://worldpopulationreview.com/country-rankings/cancer-rates-by-country>; <sup>¶</sup>, <https://databank.worldbank.org/reports.aspx?source=2&series=SP.POP.0014.TO.ZS&country=>; <sup>⁵</sup>, World Bank: <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS>; <sup>‡</sup>, <https://iris.who.int/bitstream/handle/10665/374059/9789240080379-eng.pdf?sequence=1> [Annex 3 Universal health coverage (UHC) service coverage index (SCI), Sustainable Development Goal (SDG) 3.8.1, by country, 2000–2021]. GDP, gross domestic product; CIA, Central Intelligence Agency.

**Table 2** Examples of healthcare insurance and laws related to cancer treatment

Country	Insurance & law	Date
Mexico	Seguro Popular de Salud (Popular Health Insurance): subsidized and strengthened by government until 2018 when stopped	2003–2006
	Catastrophic Expenditure Program <sup>†</sup> : for those with no access to social security—includes cancer care and hematopoietic stem cell transplants <18 years) at little or no cost to users. Required private and public health units to be Accredited Health Units including pediatric oncologists and specialized nurses (however, training level not specified)	2006
Peru	Law N° 31041 Medical Emergency Law for Timely Detection and Comprehensive Care of Childhood and Adolescent Cancer <sup>‡</sup>	2020
	Law N° 31336, National Cancer Law <sup>§</sup> : "...guarantee[s] universal, free and priority coverage of health services for all cancer patients, regardless of the type of cancer they suffer from...ensure[s] access to the fundamental right to health under equal conditions and without discrimination"	2021
Chile	National Cancer Law <sup>¶</sup> : purpose to strengthen transversal gaps in oncology, where [nursing] specialization has emerged as one of them, and dedicate public resources for this; however, at the legislature level no concrete progress in this matter	2020
Ecuador	National Cancer Control Plan <sup>#</sup> : "...firm commitment to fight cancer in light of the increasing number of cases and in response to the national cancer problem. The Ministry of Public Health, through the National Directorate of Prevention and Control Strategies, has developed the National Strategy for Comprehensive Cancer Care in Ecuador...to reduce morbidity and mortality and improve the quality of life of people affected by cancer." (p. 12)	2017

<sup>†</sup>, Lozano R, Garrido F. Improving Health System Efficiency Health Systems Governance & Financing MEXICO. Catastrophic Health Expenditure Fund. Geneva: World Health Organization; 2015. [https://cdn.who.int/media/docs/default-source/financial-protection/catastrophic-health-expenditure-fund-mexico-case-study.pdf?sfvrsn=1f49c6e1\\_5&download=true](https://cdn.who.int/media/docs/default-source/financial-protection/catastrophic-health-expenditure-fund-mexico-case-study.pdf?sfvrsn=1f49c6e1_5&download=true). <sup>‡</sup>, Government P. Ley de urgencia médica para la detección oportuna y atención integral del cáncer del niño y del adolescente-LEY-N° 31041: [busquedas.elperuano.pe](http://busquedas.elperuano.pe/); 2022. Available online: <http://busquedas.elperuano.pe/normaslegales/ley-de-urgencia-medica-para-la-deteccion-oportuna-y-atencion-ley-n-31041-1881519-1/>. <sup>§</sup>, Government P. Ley Nacional del Cáncer-LEY-N° 31336. 2022. <http://busquedas.elperuano.pe/normaslegales/ley-nacional-del-cancer-ley-n-31336-1980284-2/>. <sup>¶</sup>, <https://www.bcn.cl/leyfacil/recurso/ley-del-cancer>. <sup>#</sup>, [https://aplicaciones.msp.gob.ec/salud/archivosdigitales/documentosDirecciones/dnn/archivos/ac\\_0059\\_2017.pdf](https://aplicaciones.msp.gob.ec/salud/archivosdigitales/documentosDirecciones/dnn/archivos/ac_0059_2017.pdf).

an aspiring oncological nursing professional, through direct research on the hospital floor or preparation alongside oncologist physicians. Due to these circumstances, in 1998 the ANEPAOH was born (National Association of Professional Nurses in Onco-Hematology). The objective of the Association is to promote continuous training for nurses who tend to patients with onco-hematological ailments via conferences, workshops, and independent or CECR (Costa Rica's Nurses College) sponsored courses.

### Peru

On September 15, 2003, the Peruvian Society of Oncology Nursing was created. There have been nine presidents and Melitta Cosme, PhD (interviewee) has been one of them. The Society is aware of the growing and constant need of training more oncology nurses around the country, not only for nurses with a specialty in oncology, but for nurses of other areas who are in contact with patients with cancer.

### Oncology nursing specialty education

Here we describe how each country has approached oncology nursing education specialization and often with the support of an oncology nursing association/society.

#### Mexico

By the time the Accredited Health Units (AHUs) operation and accreditation criteria were defined [2006] in Mexico, there were no higher education opportunities in pediatric oncology nursing and very limited in general oncology nursing. The UNAM was the only institution with a program to specialize in oncology nursing and recognized by the Mexican educational authorities.

Currently, several public and private universities offer higher education in general oncology nursing, and some have introduced educational and optional modules in Nursing degree programs and related specialties (pediatrics, geriatrics, obstetrics, etc.). Institutions with

current programs in oncology nursing include three with a specialty focus, one with a diploma and one with a master's degree. Unfortunately, only a few have official validity and recognition (RVOE) issued by the Ministry of Public Education (SEP) (10). Without SEP accreditation or certification, these nursing programs are less attractive and of limited value to nurses caring for patients with cancer.

Demand for higher education among Mexican nurses is still limited due to multiple factors: working hours, economy, supply and characteristics of the study plans, as well as the absence of professional and work recognition despite the political boost a little over a decade ago of professional recognition of a bachelor's degree in nursing.

### Costa Rica

After research on various postgraduate programs in the early 2000s, it was decided that the Pontificia Universidad Javeriana in Colombia would be the option to receive and train seven nursing professionals. In 2007, four nurses graduated, and in 2009 there were three more. The education they received comprehended various fields, such as radiotherapy, chemotherapy, palliative care, oncological surgery, and hematology.

From the very start, the intention was to have these graduates from the Pontificia Universidad Javeriana as the foundation to build an Oncological Nursing master's Degree at the University of Costa Rica (UCR). Making this Degree exemplar not only in the country, but for all LATAM, was a big part of the effort. The master's degree opening proposal was presented in 2015, elaborated by the UCR's nursing sciences postgraduate program. It was approved April 19<sup>th</sup> of 2016 by the National Council of Rectors of Costa Rica (CONARE). Currently Costa Rica already has its first graduates from the program.

In Costa Rica there are now specific rooms to accommodate oncological patients, in which the nurses can talk with them to aid them during the process. There are also annual actualization courses and therapy for nursing professionals. This is part of the paramount effort that goes into humanizing the oncological nursing care in Costa Rica.

### Brazil

Regional and national Brazilian teaching and training processes for oncology nurses are not homogeneous among public or private undergraduate nursing courses in health institutions. The Brazilian Ministry of Education establishes the guidelines for all levels of national public or private education. For higher level education, one aim is to

train graduates to enter professional sectors and participate in the development of Brazilian society and collaborate in continuous training.

The National Commission for Residency in Health (CNRMS) is coordinated jointly by the Ministries of Health and Education and accredits the *Residency in the Professional Health Area* in accordance with the principles and guidelines of the Brazilian Unic Health System (SUS) based on local and regional realities and needs of the Brazilian population. In most cases the Residency objectives are to train and develop nurses to understand the complexity of nursing care related to the cancer process and the importance of prevention, early detection, diagnosis, treatment, emergencies, palliative care and late follow-up.

### Chile

In Chile, public and private universities currently train generalist nurses at the undergraduate level, who can work at the different levels of health care, and at the postgraduate level—specifically speaking of oncology—diplomas, specialization and, recently, master's degrees are being taught in advanced practice in oncology. At the doctorate level, there is nothing related to oncology nursing. Since the training of nurses at the postgraduate level began (in the 1970s), its development has been slow and gradual, achieving to date active oncology specialization programs, but without recognition in the Chilean legislature.

Indeed, it has been complex to retain nurses who, after specializing, do not see great benefits in the workplace, nor formal academic recognition, since they continue to be licensed at the curricular level. This is much more acute in the public area, which serves more than 80% of the national population, because due to the lack of recognition and the many shortcomings of the sector, nurses emigrate to other less complex areas or to the private sector, wherein there are certain economic recognitions linked to specialization.

### Peru

In approximately 2000, universities started to offer a specialization in oncology nursing as a response to the increased demand for these nurses. The first were San Marcos, Cayetano Heredia, and Villarreal universities. Oncology nursing allows nurses to exercise leadership to improve the care and treatment of patients with cancer.

*“By 2018 there were nearly 500 oncology nurses in Peru, but nearly 10 universities teaching the second specialization of oncology nursing. Today we are approximately 1,500 (oncology) nurses nationwide.”*



## Argentina

There are very few registered oncology nurses in Argentina. The specialization program (which the interviewee created) is in its 4<sup>th</sup> cohort and there are approximately 180 alumni. There has been an increasing demand for training in oncology nursing related to the incidence and prevalence of cancer in the country. This has required more and more training of nurses as noted by oncology nurse María Constanza Celano from Buenos Aires.

*“Nurses and also institutions (both public and private) have demanded more and more training, so we (my teacher and I) organized specific (oncology) courses, but the demand was even more (...) and we saw that nurses in other countries had this specialization, so we went to see how other countries taught it. We went to Colombia, Chile, and Uruguay, and we decided to set the specialization. For nurses who are not registered and cannot access graduate studies, we have the diplomado (diploma)—a 1-year course for also learning about oncology.*

*“This is a large country and there are marked differences amongst the provinces. Their realities vary greatly (...) and we see how specialists have impacted their context. We see the enormous change that they have brought about in the quality of care, in biosafety for nurses, in terms of infrastructure, they have produced new protocols for patient care...they have also created their own teams and sent them to do the specialization or the diplomado. It is fascinating to see how nurses see themselves and their role once they have finished our training, how they become actors of change and understand that they can change their reality, they learn how to defend their own ideas (...).”*

There is increased support from the pharmaceutical industry for training as well. For years the attention was only on the medical staff; however, for 10 years now, Constanza has been working closely with the pharmaceutical industry on nurse training.

## Dominican Republic

Evelyn Ramos, pediatric oncology nurse educator and her colleague “María” are the only nurses with a specialization in oncology nursing in the Dominican Republic (Evelyn in Santo Domingo and María in Santiago). They are in charge of training new colleagues, parents, and patients. Currently Evelyn is a teacher/educator at the Fundación Amigos Contra el Cáncer Infantil (Foundation of Friends Against Childhood Cancer). Today there are a few training courses available, mainly from the pharmaceutical industry directed towards how to handle and administer specific treatments.

## Scope of practice

### Brazil

For a long time, nurses in Brazil have faced common problems such as heterogeneous geographic distribution, a decrease in the nursing workforce and restrictions imposed on our clinical practice that makes it difficult to meet ever increasing societal health needs. Thus, it is important to expand the scope of nursing practice as recognized by the World Health Organization (WHO) to provide essential health services to the population, especially to those who live in remote and rural areas. In this context, the Pan American Health Organization (PAHO) recognizes the implementation of advanced practice nursing (APN) as an effective strategy to expand access and coverage to health in LATAM and Caribbean countries (11). In Brazil, there is no APN, despite the efforts of many leaders in the field. In addition, other health professionals, health system users, politicians and supporters need to understand the role and benefits of APN and how this professional role could be inserted in the Brazilian health system so that it would be possible to join efforts and move forward in this process.

### Peru

All nurses who work at INEN are required to be specialized in oncology nursing. At INEN, 80% of the oncology nurses have another specialization as well (e.g., intensive care, nephrology, or emergency medicine), or a master's or a PhD. At INEN, the nursing department consistently offers courses for continued training. During the last 2 years of the global pandemic, INEN nursing has offered 17 courses, and 5,800 nurses (including nurses from across Peru and 11 countries) were trained. The INEN oncology nursing workforce are designing protocols and guidelines with experts in oncology nursing. To date, 20 guidelines have been developed.

*“INEN nurses have 22 papers in scientific journals and 250 nurses working in research in research teams. They are internationally renowned oncology nurses.”*

### Chile

Currently, Chile has several cancer centers that develop oncology with many nurses who carry out their work with courage and vocation. The scope of the profession encompasses management, coordination and leadership skills in all Chilean health systems, being the central engine for the continuous improvement of oncological processes, flows and indicators at the institutional level even considering the long and fragmented strip of our country

with multiple rural areas far from cancer centers. Finally, the scope (of practice) includes research, whose relevance is vital for the development of information and identification of emerging problems in the specialty.

The historical gap of medical oncologists has on several occasions led nurses to take a leadership role in isolated places in our nation. Thus, to respond to the specific needs of our country, a new role for oncology nursing has emerged from the academy that would cover, in part, this need, and whose competencies highlight an enormous commitment to research, a high level of pharmacological and pathophysiological management of the disease, along with unique leadership in health teams—advanced practice oncology nursing. Faced with this situation, the National Nursing Directorate (DNE) and the Chilean Society of Oncology Nursing have put this gap on the table, seeking to achieve progress at the ministerial level through the formation of working groups together with scientific nursing societies, but without concrete results to date. On the other hand, the MINSAL (Ministry of Health) has awarded annual scholarships for public officials with some work experience, to study for diplomas and/or specialization in oncology nursing, to encourage professional and work development, but in my opinion (co-author), it has been insufficient to maintain the number of nurses in the public area.

### **Dominican Republic**

In general terms, there is a serious lack of nurses in the country, which means that training nurses in oncology should imply that they do not rotate again between services, but this is still difficult to achieve.

*“My dream is that one day we have a specialization (...) Oncology patients need trained staff, so their treatment and care is the best possible. Due to a lack of knowledge and training there is deficiency in the administration of chemotherapy. Because it is not just about administering medicine, the nurse must know what she is giving to the patient, what are the side effects, what does she need to do as a nurse to prevent and make sure to not harm the patients (...).”*

Evelyn, together with the nursing manager in INCART are making an effort train the staff that works there. Nurses prepare the chemotherapy and Evelyn oversees and coordinates all tasks related to oncology nurses.

### **Mexico**

Despite challenges mentioned earlier, with the arrival of collaborations between foreign and Mexican institutions

such as the MAS program (Mexico in Alliance with St Jude Children’s Research Hospital in Tennessee, USA) (12), the education and specialization of nursing professionals and other disciplines in pediatric oncology has been promoted. Practices have been strengthened and quality improvement projects developed, among which the role of “Nurse Educator” has been officially recognized. Nevertheless, a nurse educator role is still novel and stigmatized in Mexico since the use of nursing’s human resources in functions other than direct patient care in a clinical setting is not always considered legitimate. Other practices little known in Mexico until now are Nurse Navigator and Advanced Practice Nurse in Pediatric Oncology roles. Since these positions require support from the authorities, professional Mexican nurses must persistently and struggle against established nursing paradigms and a traditional system entrenched in the health system, society and culture to realize these career paths. Notably, once nurses take up these roles, the positions are able to be preserved and strengthened.

### **Ecuador**

The vocation and mission of nursing professionals is to respond to the inspiring call of generous dedication to humanized and transcendental care for people with a disease condition.

The philosophy, raised with several theoretical nursing contributions, regarding patients with cancer goes beyond purely physical care, because the belief system is also addressed, which includes seeking knowledge of the hemodynamic needs of the human being, to address adversity from emotional situations that govern and unbalance the personal and family environment.

Oncology, in palliative-curative care units, in hospitals or primary care areas, require nurses to carry out interventions focused on joint participation that allows them to carry out their functions effectively, combining technical-scientific knowledge, humanization and individualization of care.

### **Argentina**

There is an urgent need for the ministry to revise and update the regulations regarding what nurses can and cannot do.

*“There is need of more institutional support for nurses to be trained. They can support nurses financially or by giving them the time, the days off to attend to class, because institutions benefit from trained nurses, and not only the institution, the team, the patients, the service, all benefit. We have seen how 100% of the effort is made by the nurses themselves and that is unfair.”*

## Recommendations for strengthening oncology nursing

### Mexico

It is important that the increase in the supply and demand for higher education in pediatric and general oncology nursing training and education in Mexico is accompanied by an improvement in the employment situation in both the public and private sectors. The new generations of oncology nursing professionals are leading the way to improve and strengthen the science of the discipline in parallel to increased patient health coverage.

### Brazil

The professional roles and attributions of Oncology Nurses and Advanced Practice Oncology Nurses are not formally agreed upon among Brazilian health professionals and politicians. There is no specific legislation or corresponding remuneration or social recognition that supports them. Therefore, APN is the strategy to improve and universalize health care through mapping and validating core competencies that will allow the development of new training models aimed at advanced practice in oncology and future educational harmonization. The mapping and validation of nursing core curriculum and competencies will allow the development of new training in oncology nursing.

In our experience (co-author at Hospital do GRAACC in São Paulo) as a teaching/public institution, the reasons that commonly lead nurse professionals to leave are devaluation of professionals, overload, manager's unpreparedness and lack of leadership, low wages, lack of benefits, presence of professionals without a compatible profile with the position or the institution, failures in monitoring the integration process, problems related to the work environment and conflicting interpersonal relationships. One of the strategies used to gain this understanding was the dismissal or exit interview as a data collection tool. Knowing why nurses left oncology was essential to plan strategic actions related to good practices that could influence the professional recruitment process and in the same way address professional turnover.

### Peru

Challenges and recommendations for oncology nurses in Peru are addressed by Melitta Cosme, PhD in Lima.

*"Nurses need more support. Within the healthcare team, nurses must be recognized and acknowledged as experts. That our job is not about receiving instructions and indications, but also that we can participate in rounds, attend medical meetings. We*

*can collectively coordinate the actions around a patient and speak the same language. That nurses are not underestimated, which will also imply a raise according to their expertise, work, and the risks their job has for their lives."*

### Argentina

In Argentina, the situation for strengthening oncology nursing is complicated. Nurse Maria Constanza Celano shares the following.

*"Both private and public institutions must support nurses who want the training I mean, financial support, but also that they have protected time to undertake the studies. Also, there is need for a closer work with the pharmaceutical industry. They can provide more training and support nurses for it. The industry, the university, and the institutions can work together and facilitate nurses ongoing training and thus remain updated."*

### Chile

Despite all the barriers raised above, I (Esteban Sánchez Huaiquimil) firmly believe that specialization in oncology nursing is of enormous importance since it addresses a very specific area of health, and that it is not addressed at the undergraduate level in our country. Oncology is renewed, advances, grows and specializes every day more, so having courses or master's degrees guarantees that the care given to oncology users is timely, relevant to the needs of people and based on the latest scientific evidence available worldwide. All this is the foundation or starting point to guarantee quality in the attention of the users.

## Discussion

As we have shown in this paper, oncology nursing in LATAM has an uneven history and state of development. However, what these histories have in common is the continued interest to fortify the specialization. The increasing number of cancer cases per year make evident the need for high-quality and specialized oncology nursing training that reaches more and more nurses across each country (13). What the contributors of this paper make evident is that nurses in LATAM are willing and open to engage in further education as proper training is central for delivering the best possible care to their patients. In this sense, oncology nursing associations/societies (see Table 3), have played a paramount role in providing a space both for training and advocacy and nurses have shown admirable determination in setting in place training programs and lobbying for their recognition by competent authorities. Nonetheless,

**Table 3** List of oncology nursing societies/associations in the eight participating Latin American countries

Country	Nursing society/association	Pediatric/adult	Comment
Mexico	No free-standing national pediatric oncology nursing society/association	Not applicable	
	MAS/Mexico en Alianza con St Jude (MAS in Alliance with St Jude)	Pediatric	St Jude Children's Hospital in USA
	Agrupación Mexicana de Onco-Hematología Pediátrica (Mexican Association of Pediatric Onco-Hematology)	Both	Medical Association that nurses can join, but very few are members
Brazil	No free-standing national pediatric oncology nursing society/association	Not applicable	
	Pediatric Oncology Nursing Group	Pediatric	Part of Brazilian Pediatric Oncology Society (SOBOPE), a medical/physician society
	Brazilian Oncology Nursing Society	Adult	
	Brazilian Association of Nurses in Oncology and Onco-Hematology	Adult	
Costa Rica	No free-standing national pediatric oncology nursing society/association	Not applicable	
	Asociación Nacional de Enfermeras Profesionales del Área de Onco-Hematología (ANEPAOH) [National Association of Professional Nurses in the Onco-Hematology Area (ANEPAOH)]	Both	Focused on the educational area for nursing professionals
Chile	Chilean Society of Oncology Nursing	Both	
	Programa de Nacional de Cáncer Infantil (National Program of Childhood Cancer) (PINDA)	Pediatric	Nursing Group within the medical/physician collaborative group
Ecuador	No free-standing national pediatric oncology nursing society/association	Not applicable	No oncology nursing association or society
Peru	La Sociedad Peruana de Enfermeras Oncólogas (SPEO) (Peruvian Society of Oncology Nurses)	Adult	
Argentina	Sociedad Argentina de Cancerología (Argentine Society of Cancerology)	Adult	Nursing chapter of this society
Dominican Republic	No free-standing national pediatric oncology nursing society/association	Not applicable	

although these narratives show nurses' major achievements on establishing and maintaining their practice, the struggles for recognition and support are still present in all cases, and hinder nurses' daily work. For some cases like Mexico, Chile, Peru, and Brazil, legislation from the Ministry of Health supports nurses' continued training in the framework of contributing to cancer prevention and care. Yet for others, like the Dominican Republic and Argentina, there is a still a long path ahead. Regardless of the country, however, what we were able to show is the problematic differences between private and public institutions regarding employment conditions for nurses. This latter point is, indeed, one of the greatest challenges since, overall, nursing is a profession marked by precarity and less than ideal working conditions in LATAM—including barriers to access further training opportunities (14). Therefore, and in answering the call for providing data on the state of oncology nursing in LATAM,

the histories shared here have an enormous value for the profession in the region.

Limitations of this work include oncology nurse authors missing from several LATAM countries, and publication in English. This means nuances of Spanish and Portuguese are lost in translation, which could have made the narratives richer. Strengths of the information provided here include the diversity and number of countries represented from Mexico, Central America, the Caribbean and South America. Authors include academic, administrative, educators and clinical oncology nurses and a historian, most with more than 10 years of experience in the field.

## Conclusions

The overview of the struggle and achievements in oncology nursing across LATAM presented here demonstrates the

need for an initial pioneer nurse who sees the need for patients with cancer to have specialized nursing care. The work of these pioneers, who have sought external training in other countries, is amplified by the formation of oncology nursing associations/societies who take up the required advocacy and in some cases regulation of this specialization. Much has been achieved in the last few decades, and the number of oncology trained nurses has grown substantially. Oncology nurses on the frontline and faculty recognize the on-going need for APN roles, increased local research, and support. The evidence from LATAM oncology nurse researchers will inform the care of patients everywhere. The future is well in hand and oncology nurses across LATAM are setting the pace. LATAM oncology nurses have much to share and teach the larger oncology nursing community.

We end with a statement by the Executive Director of the Chilean Society of Oncology Nurses, Esteban Sánchez Huaquimil,

*“To conclude, I believe it is important to continue promoting the continuous training of nurses, which strengthens the work of oncology nursing and manages to innovate care management. Nursing is called to care for people throughout the life cycle, ensuring the best distribution of health resources and managing care from a biopsychosocial and spiritual perspective. That’s the way!”*

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