

# Mapping of Multiprofessional Residency Programs in Oncology for Physiotherapists in Brazil

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## Mapeamento de Programas de Residência Multiprofissional em Oncologia para Fisioterapeutas no Brasil Mapeo de Programas de Residencia Multiprofesional en Oncología para Fisioterapeutas en el Brasil

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### ABSTRACT

**Introduction:** Oncology physiotherapy is responsible for rehabilitating and restoring the kinetic and functional functions of cancer patients. Multiprofessional residency programs in cancer care are considered gold standard specializations. **Objective:** To map multidisciplinary residency programs in cancer care with slots for physiotherapists in Brazil. **Method:** Exploratory, descriptive study. A manual search and analysis of public notices available on the Internet for multiprofessional residency programs offered by the Ministry of Education in partnership with the Ministry of Health with slots for physiotherapists starting in 2022 was performed. An Excel spreadsheet was created with data of Region and State, sponsoring institution, program title and number of slots for physiotherapists and submitted to descriptive analysis, using absolute and relative frequencies. **Results:** There were 35 multidisciplinary residency programs in cancer care found, with 84 national slots available for physiotherapists. The largest number was offered for cancerology (67.85%), followed by palliative care (11.90%), onco-pediatrician (8.33%), onco-hematology (5.95%), oncology and palliative care (2.38%), older adults and palliative care (2.38%), and oncological intensive care (1.21%). **Conclusion:** The results of the present study revealed that multidisciplinary residency cancer programs exist with slots for physiotherapists in all regions of Brazil, mostly in the Southeast region, and to a lesser extent in the North, Midwest and Northeast regions.

**Key words:** physical therapy specialty/education; health human resource training; health postgraduate programs; teaching; oncology.

### RESUMO

**Introdução:** A fisioterapia oncológica é responsável por reabilitar e restaurar as funções cinético-funcionais do paciente com câncer. Os programas de residência multiprofissional na atenção ao câncer são considerados especializações padrão-ouro. **Objetivo:** Mapear os programas de residência multiprofissional na atenção ao câncer para fisioterapeutas no Brasil. **Método:** Estudo exploratório do tipo descritivo. Foram realizadas uma busca manual e a análise de editais disponíveis na Internet de programas de residência multiprofissional ofertados pelo Ministério da Educação em parceria com o Ministério da Saúde para fisioterapeutas com início em 2022. Foi criada uma planilha em Excel com informações sobre: Região e Estado, instituição promotora, título do programa e número de vagas para fisioterapeutas, submetidas à análise descritiva, por meio de frequências absolutas e relativas. **Resultados:** Foram encontrados 35 programas de residência multiprofissional na atenção ao câncer, com 84 vagas nacionais disponíveis para fisioterapeutas. O maior número de vagas foi ofertado para cancerologia (67,85%), seguido por cuidados paliativos (11,90%), oncopediatria (8,33%), onco-hematologia (5,95%), oncologia e cuidados paliativos (2,38%), idoso e cuidados paliativos (2,38%), e terapia intensiva oncológica (1,21%). **Conclusão:** Os resultados do presente estudo evidenciaram a presença de programas de residência multiprofissional na atenção ao câncer com vagas para fisioterapeutas em todas as Regiões do Brasil, distribuídas, em sua maioria, na Região Sudeste, e, em menor quantidade, nas Regiões Norte, Centro-Oeste e Nordeste do país.

**Palavras-chave:** especialidade de fisioterapia/educação; capacitação de recursos humanos em saúde; programas de pós-graduação em saúde; ensino; oncologia.

### RESUMEN

**Introducción:** La fisioterapia oncológica se encarga de reabilitar y restaurar las funciones cinéticas y funcionales de los pacientes oncológicos. Los programas de residencia multiprofesional en el cuidado del cáncer se consideran especializaciones estándar de oro. **Objetivo:** Mapear programas de residencia multidisciplinarios en atención del cáncer para fisioterapeutas en el Brasil. **Método:** Estudio exploratorio, descriptivo. Ha sido realizada una búsqueda y el análisis manual de las convocatorias públicas disponibles en Internet de los programas de residencia multiprofesional que ofrece el Ministerio de Educación en alianza con el Ministerio de Salud para fisioterapeutas con inicio en el año 2022. Se elaboró una planilla Excel con informaciones sobre Región y Estado, institución promotora, título del programa y número de vacantes para fisioterapeutas, sometidas a análisis descriptivo, utilizando frecuencias absolutas y relativas. **Resultados:** Se encontraron 35 programas de residencia multidisciplinarios para la atención del cáncer, con 84 vacantes nacionales disponibles para fisioterapeutas. El mayor número de vacantes se ofreció para cancerología (67,85%), seguido por cuidados paliativos (11,90%), oncopediatria (8,33%), oncohematología (5,95%), oncología y cuidados paliativos (2,38%), personas mayores y cuidados paliativos (2,38%), y cuidados intensivos oncológicos (1,21%). **Conclusión:** Los resultados del presente estudio mostraron la presencia de programas multidisciplinarios de residencia para la atención oncológica con vacantes para fisioterapeutas en todas las regiones de Brasil, mayoritariamente distribuidas en la región Sudeste, y en menor medida en las regiones Norte, Centro-Oeste y Nordeste del país.

**Palabras clave:** especialidad de fisioterapia/educación; capacitación de recursos humanos en salud; programas de posgrado en salud; enseñanza; oncología médica.

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## INTRODUCTION

Cancer is currently the second leading cause of death from disease in the world. By 2040, projections will exceed 28 million new cases. According to the National Cancer Institute (INCA), in Brazil, the estimate is 704,000 new cases of cancer for each year of the 2023-2025 triennium. Also according to INCA, with the exception of non-melanoma skin cancer, the most frequent in the country are breast and prostate cancers, with an incidence of 10.5% and 10.2%, respectively. The increase in the incidence of cancer cases is mainly due to population aging and exposure to various risk factors, the main ones being sedentary life style and smoking<sup>1</sup>.

Despite the high number of cancer diagnoses, new antineoplastic treatments have contributed to the increase in disease-free survival. Such oncological treatments, however, also bring side effects to the patient, especially excessive fatigue, indisposition, mood changes, reduced quality of life and decreased functionality. All these repercussions deserve special attention among health professionals who work in the care of cancer patients, due to the need to manage the acute and late sequelae of cancer treatments, whether physical or psychosocial sequelae<sup>2,3</sup>.

In order to minimize the physical and functional problems of cancer patients, physical activity has been strongly recommended as an effective tool in improving quality of life, functionality and reducing fatigue<sup>4</sup>. All individuals undergoing cancer treatment can benefit from a physical rehabilitation program, as physical exercise can mitigate the side effects of cancer treatment, as well as reduce the chances of a new cancer<sup>5</sup>.

Oncological physiotherapy arises within this context of a high number of patients diagnosed with cancer in need of humanized and comprehensive care, with the objective of rehabilitating and restoring the kinetic-functional integrity of the individual<sup>6</sup>. The specialty was regulated by the Federal Council of Physiotherapy and Occupational Therapy (Coffito) in 2009, which recognized the role of the physiotherapist with a specialization in oncological physiotherapy at all levels of health care, with emphasis on actions to promote, prevent, recover and rehabilitate cancer patients. Thus, the physiotherapist specialized in oncological physiotherapy presents himself as a professional able to offer assistance that corresponds to the specific demands of individuals with dysfunctions resulting from oncological disease<sup>7</sup>.

However, although physiotherapeutic rehabilitation is extremely important for cancer patients, preventing and/or minimizing the sequelae caused by cancer treatment, the specialty is relatively new and little known within the multidisciplinary team. In physiotherapy courses, training

is still general, with scarcity in the supply of this discipline in most colleges. There are also reduced training courses in physiotherapeutic rehabilitation related to cancer patients and insufficient knowledge about the particularities of care for this population<sup>8</sup>.

However, in this context, in order to respond to the real needs of the current socio-epidemiological profile and the health demands of the population in Brazil, multiprofessional health residencies in cancer care or oncology are presented as a training strategy of excellence, with the objective of training professionals specialized in the field and placing professionals on the labor market that guarantee safe, scientific and specialized technical assistance<sup>9</sup>. Residencies in health were established through Law n°. 11,129 of June 30, 2005<sup>10</sup> as a modality of *lato sensu* graduate education focused on in-service training, with a total workload of 5,760 hours, of at least two years, distributed in 60 hours per week, in exclusive dedication.

In view of the importance of physiotherapy in oncology and the lack of studies addressing the subject, the objective of this research was to carry out a national survey of multiprofessional residency programs (MRP) in oncology with vacancies for physiotherapists and to analyze the scenario of the specialty through the modality of multiprofessional residency in health, as well as to discuss the particularities of the performance of the physiotherapist specialized in oncology.

## METHOD

This is an exploratory, documentary, descriptive study about the current panorama of MRPs in health with emphasis on oncological physiotherapy in the country. The research was developed as a product of the residency completion work (TCR) of the PRM in cancerology of the School of Public Health of Ceará (ESP-CE).

The study was developed during the period from March to August 2022, and divided into two stages. In the first phase, there was an active search for PRM notices in cancer care with vacancies for physiotherapists with admission in 2022 on *Google* and institutional *websites*, using the terms “multiprofessional residence”, “physiotherapy”, “oncology”, “cancerology”, “cancer care” and “palliative care”. As inclusion criteria, the programs should be multiprofessional. Residency programs without vacancies for physiotherapists were excluded. Simultaneously with the search, there was a request to the Ministry of Education for the current list of MRPs in health and a visit to the *website* of the Brazilian Association of Physiotherapy in Oncology (ABFO) to consult the list of specialization programs available on the institution’s *website*.

In the second phase, an *Excel* spreadsheet was created containing the following information: Region of the country and State, promoting institution, title/nomenclature of the program, and number of vacancies for the specialty in question. In addition to the active search for notices, there was the sharing of an online form containing the same information as the spreadsheet in a national group of coordinators of multiprofessional residencies in health in an instant messaging application.

All data analyzed were based on the active search for notices and there was no response from the Ministry of Education regarding active multiprofessional residency programs in health. Only five coordinators responded to the online form, corresponding to notices already found in the manual search, so these data were not added, in order to avoid duplication of information. Data were added to a spreadsheet in the *Microsoft Excel* program and submitted to descriptive analysis, using absolute and relative frequencies.

This research did not require the analysis of a Research Ethics Committee, as it exclusively used secondary databases, without identification of individuals, in accordance with the guidelines of the Resolution of the National Health Council (CNS) n°. 466, of December 12, 2012.

## RESULTS

Twenty-six PRM notices in oncology and/or subareas of cancer care were found with the admission in 2022. The total number of vacancies available for physiotherapists, in the period of preparation of the study, was 84 vacancies throughout Brazil. The Southeast Region of the country concentrated the largest number of vacancies in residency programs in oncological physiotherapy, holding almost half of the total vacancies in the country, bringing together about 41% of the vacancies (n=35). The North Region had the lowest number of vacancies (nine), representing 10.74% of the total (Table 1).

In total, 26 institutions promoting MRP in oncology were found with vacancies for physiotherapists distributed throughout the country. Of these, 20 (76.94%) offered only one program in the respective public notice, three (11.53%) two programs, and the other three (11.53%) three programs. The Pio XII Foundation – *Hospital de Amor de Barretos*, in the State of Sao Paulo, was the only one in the country to offer the intensive care oncology program, with a vacancy. The Federal University of São Paulo (UNIFESP) presented the highest number of vacancies, with a total of eight (9.56%) vacancies available, four vacancies for the oncology program and four for the emphasis on pediatric oncology (Table 2).

Table 1. Geographic distribution by Brazilian PRM Regions and States in oncology with vacancies for physiotherapists in Brazil in 2022\*

Regions and states	Public Notice	%	Vacancies	Total Jobs	%
<b>North Region</b>		<b>7.70</b>		<b>9</b>	<b>10.74</b>
Pará	2		9		
<b>Northeast Region</b>		<b>19.23</b>		<b>13</b>	<b>15.47</b>
Bahia	1		1		
Ceará	2		7		
Pernambuco	2		5		
<b>Midwest Region</b>		<b>15.38</b>		<b>13</b>	<b>15.47</b>
Federal District	4		13		
<b>Southeast Region</b>		<b>38.46</b>		<b>35</b>	<b>41.66</b>
Espírito Santo	1		4		
São Paulo	7		24		
Rio de Janeiro	2		7		
<b>South Region</b>		<b>19.23</b>		<b>14</b>	<b>16.66</b>
Paraná	1		3		
Rio Grande do Sul	4		11		
<b>Total</b>	<b>26</b>	<b>100</b>		<b>84</b>	<b>100</b>

(\*) information obtained through notices.

The emphasis with the highest number of vacancies was oncology/cancer care, with a total of 57 vacancies, representing almost 68%. Nationally, the sub-areas of cancer care with the lowest number of vacancies were, respectively: residency program in intensive care oncology (1), oncology and palliative care (2), elderly and palliative care (2) and physiotherapy in oncohematology and/or hemotherapy (5) (Table 3).

## DISCUSSION

The purpose of the study was to conduct a national mapping of MRPs in oncology with vacancies for

physiotherapists in order to know the current scenario of the specialty through the multiprofessional residency modality and address the particularities of the performance of the oncological physiotherapist.

From the study, it was possible to find 35 MRPs in cancer care, with 84 vacancies for physiotherapists, distributed in all Brazilian Regions, but with a concentration of these vacancies in the Southeast Region.

According to the oncological care plan of the State of Sao Paulo of 2020<sup>12</sup>, the State has a highly complex Health Care Network with more than 80 oncology services and, despite facing many challenges due to the magnitude of the population and its demands, seeks an

**Table 2.** Distribution of the number of PRM notices (n=26) for physiotherapists in cancer care and number of vacancies (n=84) in Brazil in 2022\*

Institution	Programs	%	Vacancies	%
A.C. Camargo	1	2,85	4	4.76
Centro Universitário Tabosa de Almeida (Asces/Unita)	1	2,85	2	2.38
School of Public Health of Ceará (ESP-CE)	1	2,85	3	3.57
Teaching and Research in Health Sciences Foundation (Fepecs)	1	2,85	4	4.76
Pio XII Foundation – Hospital de Amor de Barretos	3	8.58	4	4.76
Foundation University Company of Technology and Science (Fundatec)	1	2,85	2	2.38
Conceição Hospital Group (GHC)	1	2,85	1	1.19
Hospital das Clínicas da Faculdade de Medicina da Universidade de São Paulo (HC-FM-USP)	1	2,85	2	2.38
Hospital das Clínicas da Faculdade de Ribeirão Preto da Universidade de São Paulo (HC-FMRP-USP)	1	2,85	2	2.38
Sírio-Libanês Hospital	1	2,85	2	2.38
Cancer Institute of Ceará (ICC)	1	2,85	4	4.76
Capixaba Institute of Education, Research and Innovation (ICEPi)	1	2,85	4	4.76
Institute of Strategic Health Management of the Federal District (IGESDF)	1	2,85	2	2.38
National Institute of Cancer (INCA)	1	2,85	5	5.95
Paraná League to Combat Cancer (LPCC)	1	2,85	3	3.57
State Department of Health of Pernambuco (SES-PE)	3	8.58	3	3.57
Department of Health of the Federal District (SES-DF)	2	5.75	6	7.14
Secretary of Health of the State of Bahia (SESAB)	1	2,85	1	1.19
Universidade Estadual do Pará (UEPA).	3	8.58	5	5.95
Federal University of Health Sciences of Porto Alegre (UFCSA)	2	5.75	4	4.76
Federal University of Pará (UFPA)	1	2,85	4	4.76
Federal University of Rio de Janeiro	1	2,85	2	2.38
University of Brasília (UNB)	1	2,85	1	1.19
Federal University of São Paulo (UNIFESP)	2	5.75	8	9.56
University of Passo Fundo (UPF)	1	2,85	4	4.76
Universidade de São Paulo (USP)	1	2,85	2	2.38
<b>Total</b>	<b>35</b>	<b>100</b>	<b>84</b>	<b>100</b>

(\*) information obtained through notices.

**Table 3.** Classification of MRPs in cancer care and number of vacancies related to oncology subareas in Brazil in 2022\*

<b>Emphasis</b>	<b>Vacancies</b>	<b>%</b>
Oncology/Cancerology/Cancer care	57	67.85
Oncology, Palliative Care	2	2.38
Elderly and palliative care	2	2.38
Palliative care	10	11.90
Pediatrics oncology or childhood cancer	7	8.33
Hematology and Hemotherapy	5	5.95
Intensive oncology therapy	1	1.21
<b>Total</b>	<b>84</b>	<b>100</b>

(\*) information obtained through notices.

effective articulation in an attempt to ensure access to oncological treatments. Perhaps, for these reasons, the Region concentrates the largest number of MRPs with vacancies for oncological physiotherapists<sup>12</sup>.

In addition, the Southeast concentrates more than 60% of the national incidence of cancer cases. These factors favor the incentive to create and offer vacancies in the area of oncology to face cancer. On the other hand, the Northeast Region concentrates an incidence of 27.8% of cancers in Brazil, representing the second region of the country in number of cancer cases, with special emphasis on breast, prostate, cervix and stomach cancer. Even so, although the Northeast Region presents great representation in cases of cancers in the country, there is a limited number of training institutions in the area, since the specialty is still not widespread in the Region<sup>1</sup>.

According to ABFO<sup>13</sup>, in a list published on the institution's *website*, there are at least four graduate programs related to oncology and palliative care in the Northeast Region, two in the State of Bahia, one in Pernambuco and one in Maranhão. None of these programs are in the multiprofessional residency modality. In the research, only three Northeastern States with MRP in oncology with vacancies for physiotherapists were found, namely Bahia, Ceará and Pernambuco. The existence of only three states with MRP in cancer care in the Brazilian region with the largest number of states and with great epidemiological relevance in cancer cases may be related to the heterogeneous configuration profile of the country and economic differences<sup>14</sup>.

The area of concentration with the highest number of vacancies in all regions of the country was the emphasis on cancer care or specifically PRM in oncology. It is important to clarify that, in some notices analyzed, the nomenclature found was "physiotherapy in oncology", "attention to cancer" or even in "cancerology", however, both terminologies represent the same meaning. The MRP in oncology is a strategy of the Ministry of Health to face cancer, which aims to train health professionals

with a critical reflective and humanized profile, enabling them to provide comprehensive care that corresponds to the specific demands of cancer patients<sup>15</sup>.

The multiprofessional residency in cancer care experiences the entire Oncology Network, ranging from primary care, focusing on prevention, promotion and early detection, to the most complex scenarios, which include all phases of treatment, whether pre-treatment, during or after, as well as palliative care. The curricular workload is divided into practical and theoretical-practical activities (80%) and theoretical-conceptual activities (20%), following the rules of the National Commission for Residencies in the Professional Health Area (CNRMS). During the residency, it is also necessary to write a TCR that must be defended at the end of the second year of the program to obtain the diploma<sup>15</sup>.

Although the training is predominantly focused on in-service training, that is, the learning experienced in daily practice, most programs present theoretical modules with classes on the bases of oncology, oncology patient safety, public policies in oncology, Health Care Network, the so-called transversal axes, and classes of the specific axes, divided by professional categories (physiotherapy, occupational therapy, pharmacy, nutrition, nursing, social work, psychology, speech therapy, among others)<sup>9,15</sup>.

The role of the physiotherapist in oncology is primarily related to the maintenance of functionality and quality of life. Individuals diagnosed with cancer face a long treatment, and the physiotherapist with expertise in this area is responsible for ensuring that the side effects and limitations resulting from the treatments are mitigated, mainly through a structured and specialized program of exercises, aerobic training, use of complementary integrative techniques and health guidance, tools that are extremely important for the safe and effective rehabilitation of these patients<sup>7,16</sup>.

Due to advances in antineoplastic treatments and early screening measures, disease-free survival has increased. Currently, cancer can be considered a chronic disease,

since the number of patients surviving the disease is increasing, living with the late sequelae of treatment and the disease itself<sup>2,16</sup>.

Although physiotherapy in oncology is relatively new and not widespread among the medical and multiprofessional team, the specialty has gained a lot of prominence due to the increase in the number of cancer diagnoses and the extreme need for multidisciplinary follow-up of cancer patients. Cancer patients face limitations in functionality, in daily and work activities, and need physical therapists who know the types of tumors, the types of treatments and side effects, and the particularities of different audiences, from children to the elderly, in all phases of treatments<sup>8,17</sup>.

In general, the areas of greatest knowledge of physiotherapy among health professionals and the population itself are the specialties of intensive care, cardiovascular rehabilitation, trauma-orthopedics and neurorehabilitation. Only in 2009, the specialty of physiotherapy in oncology was recognized by Coffito<sup>7</sup>. And, after its regulation, it began to gain more visibility<sup>7,18</sup>.

In oncology, there is a division into two main categories: solid tumors and hematological neoplasms. With regard to hematological tumors, they are malignancies of hematopoietic origin, related to the disordered proliferation of cells of lymphoid or myeloid tissue. The main hematological cancers are: leukemia, Hodgkin's and non-Hodgkin's lymphoma, and multiple myeloma. The focus of physiotherapy in oncohematology is mainly on maintaining the quality of life and rehabilitation of these patients and, in some cases, on assistance during pre- and post-hematopoietic stem cell transplantation (HSCT)<sup>19,20</sup>.

Most onco-hematological patients, when under treatment, face long periods of hospitalization, focusing on the induction, consolidation and maintenance of antineoplastic therapies, and such therapies affect not only the functionality, but also the immunity of these patients. Physiotherapeutic rehabilitation aims to minimize the cardiotoxic, neurotoxic and cytotoxic effects of these treatments, prevent or treat respiratory complications resulting from opportunistic infections and favor the physical conditioning of these patients. Thus, it is clear that the physiotherapist is extremely necessary within the hematology sectors, in order to ensure that patients face the minimum possible adverse effects, with specialized assistance<sup>19</sup>.

Related to the area of oncology, only three MRPs were found with vacancies for physiotherapists in hematology and hemotherapy throughout the country. Of these, two programs have the institution of origin in the South Region, in the State of Rio Grande do Sul, with three total vacancies, and another in Para, in the North Region, with

two vacancies. In the other Regions, no MRPs were found in this area, revealing a shortage in onco-hematology and the need for incentives in this sub-area. In this scenario, it is observed that the assistance to the hematological patient is in charge, in most cases, of professionals with generalist training.

In the field of oncology, another area of great prominence is palliative care. During the research, seven MRPs were found exclusively in palliative care with vacancies for physiotherapists, resulting in ten vacancies. Only in the Southern Region of Brazil, no notices offering multiprofessional residency specifically in palliative care were found.

Palliative care, according to the 2002 update of the World Health Organization (WHO), consists of the care promoted by the multidisciplinary team in the presence of a serious and life-threatening disease. This assistance seeks to promote relief from the physical, psychosocial and spiritual sufferings that patients and their families face, as well as to ensure that human dignity is respected, not hastening or postponing death. Physiotherapists residing in oncology and palliative care receive complete and robust training in an attempt to enable these professionals to prevent preventable complications, relieve and control pain and dyspnea, as well as manage palliative care<sup>21</sup>.

The incidence of childhood cancer estimated for Brazil, for each year of the three-year period from 2023 to 2025, is 7,930 cases, with a higher rate in males. The most common malignancies at this stage are leukemias, central nervous system tumors and lymphomas<sup>1</sup>. With regard to the area of pediatric oncology or pediatric oncology, only two states, Rio Grande do Sul and São Paulo, presented the MRP in oncological physiotherapy in pediatric oncology, offered by UFCSPA and UNIFESP, respectively. Only seven vacancies were found for the entire country, which reveals that there is also a deficiency of this subspecialty.

Children diagnosed with cancer usually have several negative repercussions related to chemotherapy, radiotherapy and cancer surgery treatments or the association of all of them. Side effects may accompany children not only during treatment but also after termination. The main symptoms are nausea, vomiting, indisposition, decreased functionality, respiratory infections and the impact on quality of life. Pediatric oncological physiotherapy works in all phases of treatment and aims to minimize the side effects of treatments and promote the maintenance of functional capacity. Thus, there is a need for expansion in this area of oncology for more specialized care for children with cancer<sup>22,23</sup>.

Given the above, the data found reveal that the number of MRPs in cancer care, as well as the offer of vacancies for physiotherapists, is still insufficient in the

country when taking into account the relevance and need for physiotherapy in oncology. It appears that the study reaffirmed the importance of oncological physiotherapy, as well as enabling knowledge about the specialization in multiprofessional residency modality, revealing, however, the need to create and distribute more MRP in oncology in order to meet the demands of the oncology population.

As limitations of this study, there is no access to the official and updated list of multiprofessional residences in the country, requested from the Ministry of Education, which makes it impossible to state that all programs were included in the mapping. However, to minimize this bias, a multi-methodological approach was built, as presented in the methods and results to obtain maximum safety and coverage of the collected data. It is important to point out that there was no analysis of PRM notices in oncology in the country in general to investigate how many cancer care programs exist in the country, regardless of the presence of available vacancies for physiotherapists, which limited the understanding of the real panorama of PRM in oncology in the country.

## CONCLUSION

The results of the present study showed the presence of multiprofessional residency programs in cancer care with vacancies for physiotherapists in all regions of Brazil, mostly distributed in the Southeast Region, and, to a lesser extent, in the North, Midwest and Northeast Regions of the country. Vacancies were found not only in the area of cancer care, but in several subareas of oncology, mainly in palliative care, pediatric oncology and onco-hematology. The study showed the need for more incentives for the creation of MRPs in cancer care for physiotherapists, given the importance of their performance and the growing incidence of cancer cases.

## CONTRIBUTIONS

All authors contributed substantially in the design and/or planning of the study; in the analysis and/or interpretation of the data; in the writing and/or critical review; and approved the final version to be published.

## DECLARATION OF CONFLICT OF INTERESTS

There is no conflict of interest to declare.

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