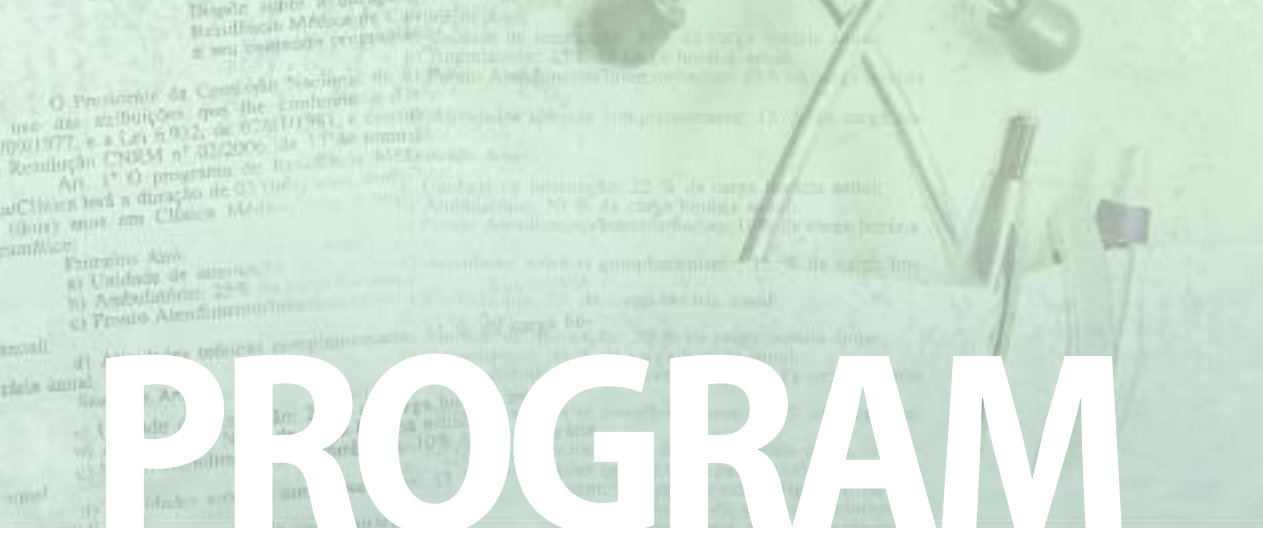




SOCIEDADE BRASILEIRA DE ONCOLOGIA CLÍNICA  
BRAZILIAN SOCIETY OF CLINICAL ONCOLOGY



SECRETARIA DE EDUCAÇÃO  
RESOLUÇÃO Nº 10, DE 31 DE JULHO DE 2007



# PROGRAM

## Competence-Oriented Program of Medical Residency in Clinical Cancerology



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## Dear SBC and SBOC Associates

In the past three years the Brazilian Society of Cancerology (SBC), the Brazilian Society of Clinical Oncology (SBOC) and the Teaching Department of the National Cancer Institute (INCA) – Health Department under coordination of Dr. Eliana Cláudia de Otero Ribeiro, have joined efforts in the reformulation of the program of Medical Residency in Clinical Cancerology by carrying out two forums; the 1st one in 2005 at INCA and the 2nd one in 2007 at AC Camargo. The proposal formulated in those forums was presented to the National Commission of Medical Residency (CNRM) on June 5th 2007, when it was approved in a cameral meeting. Resolution #10 with the new set of norms from July 31st 2007 was published on the Union Official Diary (DOU) from August 7th 2007, with the change in the residency period from 2 to 3 years, based on the definition of competence profiles (Clinics, Education, Management and Research) taking effect for the students beginning the 1st year of Clinical Cancerology on February 1st 2008.

We now begin a new stage aiming at the quality of the residents' education, as well as their evaluation, qualification of the tutorat and evaluation of the programs through accreditation.

This material includes the administrative measure of approval by the Higher Education Secretariat, the approved proposal and the project for the 2nd stage of evaluation of the quality of the education, already in progress. The whole material can also be accessed online at the websites: [www.svoc.org.br](http://www.svoc.org.br) and [www.sbcancer.org.br](http://www.sbcancer.org.br).

Yours sincerely,

**Dr. Enaldo Melo de Lima**

President of SBOC

**Dr. Roberto Porto Fonseca**

President of SBC

# Three years of Program of Medical Residency in Clinical Cancerology: finally made official!

Dear Friends,

Due to the significant increase in the knowledge related to oncology and to the growing need for the participation of clinical oncologists in other activities such as teaching, research and management, the Program of Medical Residency in Clinical Cancerology, organized with the duration of 2 years, has gradually become insufficient to fulfill the basic needs. In that sense, INCA's Consultative Board (CONSINCA) has organized two workshops in which the restructuring of the Medical Residency Program was exhaustively discussed, following a philosophy based on the competence profile which must be achieved by the end of the program. That professional competence profile incorporates four spheres: regular clinics, the need for professionals with clinical research education, education and management capability. The first workshop took place at INCA in 2005 and the second one in 2007 at A.C. Camargo Hospital. Representatives of clinical cancerology residency programs from several states were present, as well as the Brazilian Society of Clinical Oncology and the Health Department. That great enterprise resulted in a project for the implementation of the medical residency program with three years of duration, elaborated in such a way that the resident can gradually absorb the whole necessary information load. The project was appreciated by the National Commission of Medical Residency (CNRM/MEC) and was approved and published on the Union Official Diary on July 31st 2007. Merits to everyone who collaborated somehow with this great conquer for our class.

**Dr. Daniel Luiz Gimenes**

Teaching Vice-President of SBOC

The National Commission of Medical Residency's approval of the Competence-Oriented Program of Medical Residence in Clinical Cancerology is the product of a collective effort by SBC, SBOC, INCA/MS (Health Department) and educational institutions of this field, with the support by SGETS/Health Department. It began in 2005, with the formation of a Human Resources working group by CONSINCA with the objective of adequating the medical residency programs, surprised by the sudden reduction of the education period from 3 to 2 years. The whole version of the approved Program is available at [www.sbc.org.br](http://www.sbc.org.br) and [www.sbcancer.org.br](http://www.sbcancer.org.br), being its consultation advised for full knowledge regarding the approved modifications.

The publication in the Official Diary seals the commitment with a new stage of quality in the education, with which all partners are engaged. It refers to the development of a quality program, aiming at the design of appropriate instruments for the evaluation of the residents, the elaboration of initiatives of qualification of the tutorat and evaluation of the programs, ensuring the application of pactuated criteria of accreditation of institutions with capacity to educate and certify professionals with excellence.

**Dra. Eliana Claudia de Otero Ribeiro**

Teaching Coordinator of the National Cancer Institute –  
Health Department

## RESOLUÇÃO Nº 10, DE 31 DE JULHO DE 2007

Dispõe sobre a duração do programa de Residência Médica de Oncologia/Clinica e seu conteúdo programático.

O Presidente da Comissão Nacional de Residência Médica, no uso das atribuições que lhe conferem o Decreto 80.281, de 05/09/1977, e a Lei 6.932, de 07/07/1981, e considerando o disposto na Resolução CNRM nº 02/2006, de 17 de maio de 2006, resolve:

Art. 1º O programa de Residência Médica em Oncologia/Clinica terá a duração de 03 (três) anos, sendo como pré-requisito (mas não em Clínica Médica, com o seguinte conteúdo programático:

Primeiro Ano:

- a) Unidade de internação: 50% da carga horária anual;
- b) Ambulatório: 25% da carga horária anual;
- c) Pronto Atendimento/Intensificadora: 10% da carga horária anual;
- d) Atividades teóricas complementares: 15 % da carga horária anual.

Segundo Ano:

- a) Unidade de internação: 22 % da carga horária anual;
- b) Ambulatório: 50 % da carga horária anual;
- c) Pronto Atendimento/Intensificadora: 10% da carga horária anual;
- d) Atividades teóricas complementares: 15 % da carga horária anual.

Terceiro Ano: 10% da carga horária anual.

Quarto Ano:

- a) Unidade de internação: 10 % da carga horária anual;
- b) Ambulatório: 40 % da carga horária anual;
- c) Pronto Atendimento/Intensificadora: 50% da carga horária anual;
- d) Atividades teóricas complementares: 15 % da carga horária anual.

e) Hospício Ocidentais: 10 % da carga horária anual.

Art. 2º As instituições credenciadas para Residência Médica em Oncologia/Clinica devem, obrigatoriamente, disponibilizar feiras específicas em unidade de internação de adultos, ambulatório específico para atendimento em oncologia clínica, unidade de pronto atendimento/intensificadora. Deve assegurar, segundo as suas condições de estrutura, atividades de atenção ambulatorial e em unidade de internação aos pacientes com interdições oncológicas.

Art. 3º Esta Resolução entra em vigor na data de sua publicação, revogando-se as disposições em contrário.

KORNALDO MOTA

### Department of Education

### Higher Education Secretariat

### Resolution #10, from July 31st 2007

## It refers to the duration of the program of Medical Residency in Clinical Cancerology and its programmatic content

The President of the National Commission of Medical Residency, in his/her attributions granted by Decree 80.281, from September 5th 1977, and law 6.932, from July 7th 1981, considering the dispositions from Resolution CNRM # 02/2006, from May 17th 2006, resolves:

**1st Article** - The program of Medical Residency in Clinical Cancerology will have the duration of 3 (three) years, with pre-requisite 2 (two) years in Internal Medicine, with the following programmatic content:

***First Year:***

- a) Care Unit: 50% of the annual working hours;
- b) Ambulatory: 25% of the annual working hours;
- c) Emergency Room/Intercurrences: 15% of the annual working hours;
- d) Theoretical complementary activities: 15% of the annual working hours.

***Second Year:***

- a) Care Unit: 22% of the annual working hours;
- b) Ambulatory: 50% of the annual working hours;
- c) Emergency Room/Intercurrences: 10% of the annual working hours;
- d) Theoretical complementary activities: 15% of the annual working hours;
- e) Radiotherapy: 3% of the annual working hours.

***Third Year:***

- a) Care Unit: 10% of the annual working hours;
- b) Ambulatory: 60% of the annual working hours;
- c) Emergency Room/Intercurrences: 5% of the annual working hours;
- d) Theoretical complementary activities: 15% of the annual working hours;
- e) Occupational Internships: 10% of the annual working hours.

**2nd Article** - The institutions credentialed for Medical Residency in Clinical Cancerology must, obligatorily, have specific beds in adult care units, a specific ambulatory for assistance in clinical cancerology and an emergency unit available. They must ensure, according to the institution's characteristics, ambulatorial attention activities and care units for patients with onco-hematological diseases.

**3rd Article** - This Resolution takes effect on the date of its publication, revoking the contrary dispositions.

RONALDO MOTA

(Published on the DOU #151, Tuesday, August 7th 2007).

# 2

## Competence-Oriented Program of Medical Residency in Clinical Cancerology: Trajectory of a collective construction

### 1. Introduction

From the recognition of the urgent necessity of reevaluating the programs of Medical Residency in Clinical Cancerology in terms of their content and duration, considering the determinations of the National Commission of Medical Residency (CNRM), the Brazilian Society of Clinical Oncology (SBOC) has promoted the inclusion of the theme in INCA's Consultative Board (CONSINCA). CONSINCA, comprised of representatives of the distinct spheres of management of the Unified Health System (SUS), private and philanthropic

service renderers, societies of specialists and users, in its February 2005 meeting, pronounced in favor of the creation of a Working Group (WG) oriented towards the formation of human resources for the control of cancer in the country.

The WG understood its purpose of building legitimacy for the introduction of processes of pactuation of professional profiles in the cancerology area among the several actors involved in the formation, regulation of the professional exercise and rendering of assistance, aiming at ensuring the planning of formation programs that fulfill the commitment of excellence in the care demanded by the society, to be carried out by the SUS in the distinct regions of the country.

The Board considered as the first task of the referred group the construction of solid arguments, based on a clearly defined work methodology, which would orient the debate in a national level in terms of the duration of the programs of medical residency in clinical and cirurgical cancerology, aiming at responding to INCA's unequivocal commitment with the education of competent professionals to act in all levels of care in the oncologic attention network in the country.

Considering the guideline that the decisions to be made must result from a debate and a consensus to be built among the groups and institutions involved in the education of cancerology professionals in the country, INCA, in a partnership with SGETS/MS invited them to define and approve the work plan, proposed and organized by means of a workshop cycle with the objective of building the competence-oriented programs of medical residency.

Based on that guideline, the 1st Workshop of that cycle was held at INCA, Rio de Janeiro, on March 31st 2005, through which the methodology and chronogram of the work were pactuated. The following goals were defined:

- Building in a pactuated manner the competence profile in the areas of Clinical and Cirurgical Cancerology;
- Building a political-pedagogic project able to provide the capabilities and excellence pattern designed in the competence profile;
- Providing subsidies for the policies of education and certification in the oncologic specialties.

Criteria that could allow the selection of the participating institutions were identified, enabling the exploration of the several points of view involved in the educational process and in the professional exercise in the distinct macro-regions in the country. Private and

philanthropic institutions rendering public services; societies of specialists; educational institutions; institutions regulating the professional exercise and managers of the SUS were convoked to indicate professional clinical cancerologists who, in their opinion, represented the pattern of excellence that the institution would legitimate. Attachment 1 contains the list of institutions responsible for the indications and the people indicated.

In accordance with the proposed methodology, a second workshop explored the capabilities and competence areas of clinical cancerologists, whose practice reflected, according to each institution's view, the professional exercise of excellence. The exploration of the activities developed by those professionals, their capabilities and what they considered the profile of excellence, themes debated based on the several contexts and scenarios of the professional exercise, resulted in the elaboration of a document-synthesis, comprising competence areas, key-actions and performances.

The profile outlined in workshop 2 (participants listed in attachment 1) was forwarded to other 18 clinical cancerologists in the country for validation. From that second validation stage resulted the final document (attachment 2), related to the Clinical Cancerologist's professional profile by competence areas.

The work process that followed those two first workshops represented the union of the efforts of all those involved in the formation of the Clinical Cancerologist in the country. Representatives of the 43 Educational Institutions in this field were invited to participate in the "Working Group for the Competence-Oriented Programs of Medical Residency in Clinical Cancerology", as an initiative of cooperation and mutual support aiming at the restructuring of their Medical Residency programs according to a competence profile collectively outlined by those involved in Oncologic Attention in the country. The constituent members of the WG, representing 21 medical residency programs from different regions in the country, of public and private nature, are listed in attachment 3.

## 2. Methodological Assumptions

The national health and education policies indicate guidelines oriented towards changes in the processes of education and professional certification. Such changes – and the National Curricular Guidelines are exemplarily cited here – were the product of intense debates between distinct actors and reaffirm to all those involved in the formation of health professionals the necessity of recognition and amplification of the social responsibility that falls upon them and of a repactuation for the processes of institutional accreditation, definition of competences and professional certification.

The patterns of competence used for the professional certification explicit what the professional must know and be able to do to perform his/her practice successfully in distinct scenarios, enabling the development of the professionalism (Lima, 2005). Thus, they reflect the values attributed by the society to the capabilities that legitimate the exercise of any given career or specialty and that, coherently, must orient the processes of formation and evaluation of professionals.

The curricular orientation by competence synthesizes an expressive change in the assumptions and organization of the current formation courses for health professionals. However, due to the uses of the term competence, it is necessary to explicit the conception used here, necessarily related to the matters of professional education and qualification and, therefore, to the educational and work policies.

Proposing the formation of professionals capable of developing a new practice in health committed with the principles that guide the Unified Health System implies, along with the definition of a new profile desired, the approximation of the constitutive elements of that new form of doing and thinking. In that sense, along with the scientific knowledge that forms the base of the professional action and gives it legitimacy, there is the necessity to take into account the interests of the distinct actors who, in fact, with greater or smaller power, explicitly or implicitly, participate in the process of decision and choice of the necessary knowledge and the professional profile required for the development of health practices, known to be oriented by diverse political-ideological projects. (Ribeiro and Lima, 2004)

Therefore, a distinctive dimension of the professional competence is highlighted, recognizing that the processes of certification of competences represent, in fact, instruments for the society to make sure that certain knowledge is socially recognized, leaving the private sphere and entering the public one, which immediately places the matter of competences in the field of the conflicts of interests, relations and power hierarchies in the society. (Hernandez, 2002)

The distinctive base of the conception of competence used here is fundamented by the comprehension of the curriculum as social production, the social role of the educational institution and the relations it establishes with society in that production. In this case, particularly, it is worth highlighting that the commitment of the High Complexity Oncology Centers (CACONs), teaching and university hospitals, site of credentialed programs of residency in cancerology, with SUS's quality of oncologic attention, are the base upon which lie the excellence formation programs.

## 3. Restructuring of the Programs of Medical Residency in Clinical Cancerology

### 3.1 The context of the formation and certification

The Medical Residency in Clinical Oncology was regulated 24 years ago, through Resolution CNRM # 004/1983. The creation of the Mixed Specialties Commission (CME), installed on April 29th 2002, formed by the National Commission of Medical Residency (CNRM), Brazilian Medical Association (AMB) and Federal Medicine Council (CFM), had the objective of defining the medical specialties and their respective fields of work. It assumed that the specialties that had a medical residency credentialed by the CNRM would be automatically referended by that commission. In that sense, in a first analysis carried out by the CME, Clinical Oncology was accepted as a specialty. However, it was not a specialty affiliated to the AMB, a criterion necessary for its recognition. The publication, on April 11th 2002, of the CME Resolution # 1634 characterizes Clinical Oncology as a field of work of Cancerology, a specialty affiliated to AMB. That resolution modifies the name of the medical residency in Clinical Oncology to Clinical Cancerology, aiming at legalizing that situation. CME issued a new resolution on May 7th 2003 (CME Resolution # 1666/2003) ratifying Cancerology as a specialty, however it subtracts its respective fields of work (cirurgical oncology, pediatric oncology and clinical oncology). From that date, the titles to be obtained are: Clinical Cancerology, Pediatric Cancerology and Cirurgical Cancerology. The process for obtaining the new titles becomes an SBC's prerogative.

Understanding that the medical residency in clinical cancerology was inappropriately structured, as well as the evaluation of the title of specialist in clinical cancerology (TECA) and that they should be restructured, SBC, SBOC and AMB signed a covenant on July 11th 2006 with AMB's official endorsement for the adjustment of the formation and certification in the specialty.

In that context, the initiative promoted by COSINCA gains a new dimension and continues into a new stage in 2007.

The Clinical Cancerologist's built and validated profile was analyzed and discussed by the representatives of the credentialed Medical Residencies in a third meeting of the workshops cycle, in which the "Working Group for the Competence-Oriented Programs of Medical Residency" was put together. That workshop had the objective of characterizing the cycles of formation of the Clinical Cancerologist necessary to achieve the proposed profile and to define the contents, scenarios, teaching-learning experiences in each one of

the formation cycles. In other words, after that first exercise of construction of minimum criteria for the certification of the new students, there was a long debate related to the necessary conditions for the development and operationalization of medical residency programs that would ensure the formation of Cancerologists with such a level of autonomy in the professional exercise. A sub-working group was made responsible, in that workshop, for giving the final shape to the plan based on the pactuated guidelines and presenting the final proposal for the online validation of the whole group.

### **3.2 The restructuring by competence and the social relevance of the formation**

Considering the profile defined in workshop 2, the number of new cancer cases in the country was analyzed as a base for the discussions regarding the formation. The malign neoplasias have been an important cause of morbi-mortality all over the world, as well as in Brazil. Data from the Health Vigilance Secretariat of the Health Department reveal that between 1980 and 2004 there was an increase of 68% in the number of deaths by cancer in Brazil, being the malign neoplasias the second larger cause of death in our country (13,6%), behind only the diseases related to the cardio-circulatory system.

According to the National Cancer Institute estimations, the number of new cases of cancer in Brazil in 2006 was 472.050, being 234.570 among men and 237.480 among women. In terms of the frequency of specific sites, among men the highest ones are prostate, lungs, stomach, colon and rectus and oral cavity. Among women, the five most common tumors are breast, cervix, colon and rectus, lungs and stomach. (Table 1). Those references are fundamental for the qualification of learning scenarios that ensure the exposure of the trainees to the most prevalent oncologic pathologies in the country.

**Tabela 1**

Estimation of the gross incidence rates by 100.00 and of the number of new cases of cancer, in men and women, by region, in 2006

**MEN**

Primary Location Malign Neoplasia	Estimation of new cases			
	State		Capital	
	Cases	Gross Rate	Cases	Gross Rate
Trachea, Bronchus and Lung	17.850	19,41	5.300	26,40
Stomach	14.970	16,30	3.950	19,68
Prostate	47.280	51,41	13.980	69,74
Colon and Rectus	11.390	12,36	4.390	21,78
Esophagus	7.970	8,64	1.720	8,47
Leukemia	5.330	5,82	1.570	7,78
Oral Cavity	10.060	10,91	3.050	15,01
Skin Melanoma	2.710	2,92	830	3,80
Other locations	61.530	66,92	18.370	91,45
<b>Subtotal</b>	<b>179.090</b>	<b>194,77</b>	<b>53.160</b>	<b>264,63</b>
Skin non-melanoma	55.480	60,74	13.680	68,13
<b>All Neoplasias</b>	<b>234.570</b>	<b>255,14</b>	<b>66.840</b>	<b>332,62</b>

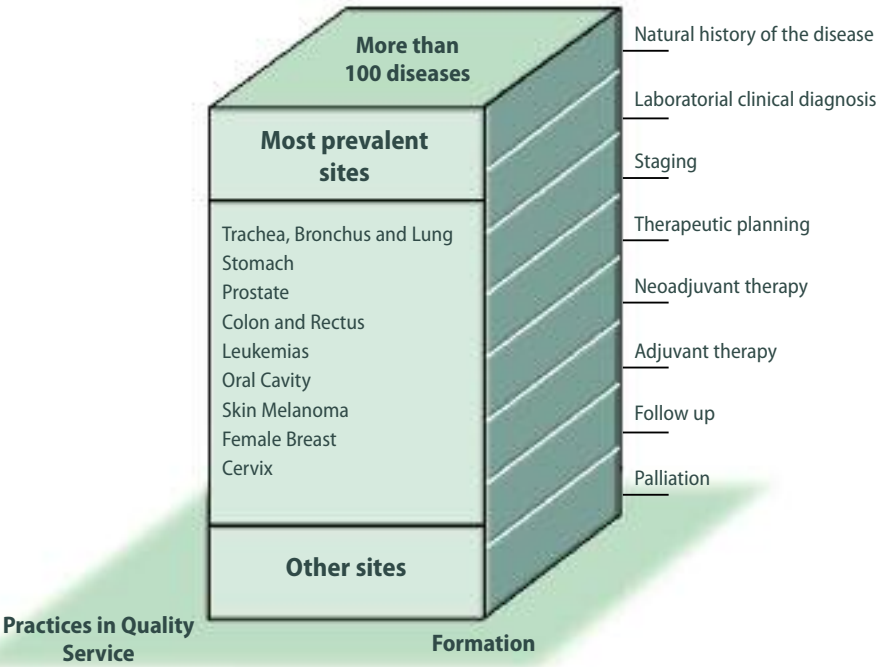
**WOMEN**

Primary Location Malign Neoplasia	Estimation of new cases			
	State		Capital	
	Cases	Gross Rate	Cases	Gross Rate
Female Breast	48.930	51,66	17.900	80,54
Trachea, Bronchus and Lung	9.320	9,82	2.980	13,38
Stomach	8.230	8,65	2.610	11,55
Cervix	19.260	20,31	6.030	27,11
Colon and Rectus	13.970	14,73	5.370	24,09
Esophagus	2.610	2,74	600	2,43
Leukemia	4.220	4,45	1.360	6,08
Oral Cavity	3.410	3,58	1.130	4,92
Skin Melanoma	3.050	3,16	940	4,02
Other locations	63.320	66,78	22.750	102,17
<b>Subtotal</b>	<b>176.320</b>	<b>185,95</b>	<b>61.670</b>	<b>276,96</b>
Skin non-melanoma	61.160	64,53	15.340	68,92
<b>All Neoplasias</b>	<b>237.480</b>	<b>250,45</b>	<b>77.010</b>	<b>345,94</b>

**Source:** Estimation of the number of new cases of cancer by region in 2006. INCA, 2005.

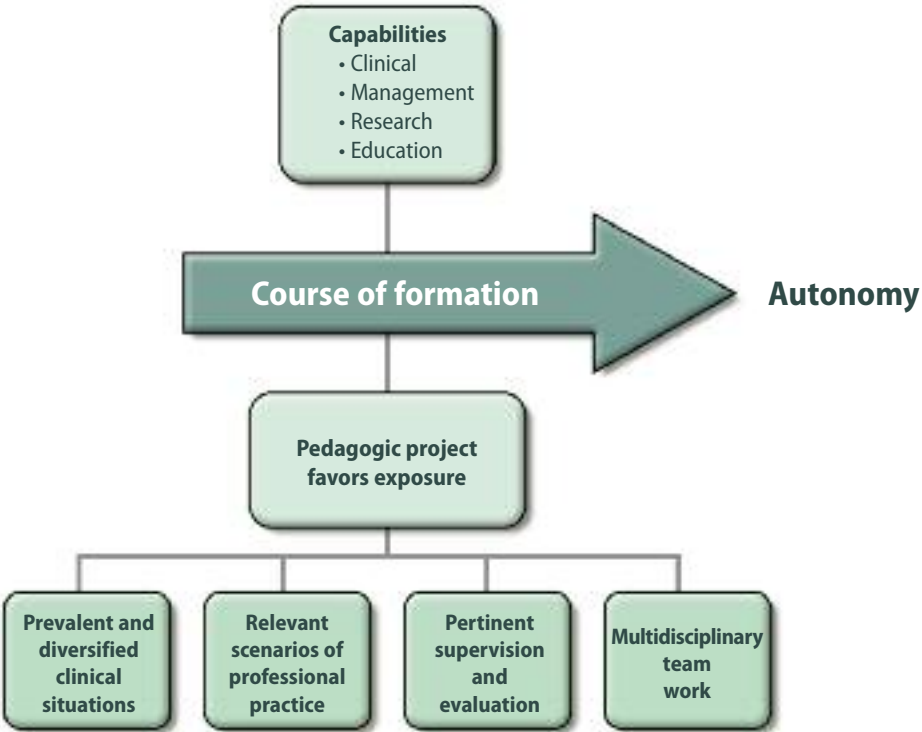
The clinical cancerology area comprises the study of tumors in all organs and systems, which is quite an extensive universe. Besides that, each primary site has individual nuances related to risk factors and different histological types associated with a hundred distinct diseases. Each type of tumor offers, also, diversified possibilities of being tracked for precocious diagnosis, presents different clinical manifestations according to the stages of development of the disease, and, in each of them, demands indication of diagnostic methods and singular therapeutic modalities. In that sense, it is reasonable to assume that the clinical cancerologist deals with a wide spectrum of clinical conditions, which demands the control over equally wide capabilities. Such capabilities are developed, according to the educators' expertise, as they confront the different oncologic pathologies and according to the necessity of clinical interventions in each moment of development of the disease since the beginning of the training program, however the autonomy regarding the clinical decision – and along the course of evolution of the disease the decisions to be made get more complex – is only reached through the compliance with the cycles of formation that include the gradual acquisition of capabilities that enable the resident to gain experience to follow the course of the disease and to confront the several possible results, including the death of the patient. (Picture 1)

**Picture 1**



With the course program based on competences, not only the cognitive characteristics are valued, but fundamentally the capability to execute tasks that are appropriate to the profile desired, under the technical-scientific perspective, but also in its practical and human dimensions. According to the outlined profile, not only exclusively clinical capabilities must be contemplated, but also educational ones, related to management and research.

**Picture 2**



Lately, the health systems from different countries (developed or not) have been suffering great pressures to incorporate new technologies in the health area. That fact, combined with the gradually clearer limits of access to resources, makes the appropriate management of limited resources even more challenging. Cancerology is an extremely dynamic area of the medical knowledge, in which there is a high number of registers of new drugs in the regulatory agencies, demanding from the professionals the critical capability to analyze the best options to be offered to the patients. The assessment of such technologies related to health constitutes a fundamental process for the therapeutic decision making and resource allocation. The control over the tool for critical knowledge assessment, evaluation of risks and benefits in their dimensions of efficiency, effectiveness, usefulness, besides the firmness in the principles of equity, ethics and economic outcomes of the clinical decisions, are essential to the formation of the clinical cancerologist committed to the principles of the SUS.

The administrative measure 741/SAS, regarding the reorganization of the high complexity services related to cancer, clearly defines the role to be played by the clinical cancerologists in the management of the oncologic attention services in the country, besides establishing that their formation must, consequently, ensure the necessary capabilities for that purpose.

### **3.3 The formation cycles according to the level of clinical autonomy**

The structuring axis of the program under construction is the development of the autonomy in the clinical practice, to which the other areas of competence are related. The whole spectrum of the Clinical Cancerologist's performance is experienced by the resident from the most initial moment of the formation, with progressive autonomy gain, to be achieved in a context of integrality in the approach to the cancer problem. The resident doctor, with minimum requirement of two years in internal medicine, is introduced to the oncologic patient, learns how to evaluate him/her, to carry out the staging, gets to know the therapeutic arsenal, as well as the possible complications of the disease, gains specific abilities in the initial handling of emergency situations, identifies progressively more complex situations and gradually gains autonomy in the decision making process. The concept of team work is strongly demonstrated and necessarily applied. According to this model, the resident doctor accumulates, along the program, specific knowledge and abilities, proper from each cycle. The goals of the biannual learning are presented through capabilities acquired in previous stages.

In that sense, in the 1st cycle of formation, the goal is the learning related to the initial approach to the diseases faced by the resident, understanding the natural history of the disease and intervening with his/her clinical baggage, punctually, in all stages of the process. The resident gains, in this stage, capabilities to recognize the specific characteristics of each neoplasy in each stage, the response to the treatment and toxicity caused by the praised therapeutics, besides habilitating to carry out invasive diagnostic and therapeutic procedures. In the 2nd cycle, the resident is capable of indicating and performing the adjuvant treatment and advances into a systemic approach to the patient, attentive to his needs in the different moments of the course of evolution of the disease. In this stage, he/she exercises the capability to decide and refines his/her performance in the clinical practice, with an integral perspective of cancer control – from the prevention and precocious diagnosis to palliation, based on the knowledge and experience acquired in the 1st cycle. Finally, in the 3rd cycle the resident is able to conduct the therapeutic plan in more complex clinical situations, with a multi-professional approach, actively interacting, in the distinct services, with the other professionals involved in the care of the patient. (Charts 1 and 2). He/She develops, in this period, a wider and more critical view of the cancer problem in

its multiple dimensions and, under this perspective, may contribute to research projects and to the organization of management in an effective way, in the different levels of performance and in the distinct contexts of the practice of a clinical cancerologist in Brazil.

**Chart 1**

Performances expected according to the cycle of formation

	CYCLE 1		CYCLE 2		CYCLE 3	
	1st Semester	2nd Semester	3rd Semester	4th Semester	5th Semester	6th Semester
Carries out anamnesis/physical exam						
Carries out 1st appointment						
Evaluates clinical condition and staging						
Carries out pharmacological control of the pain						
Carries out initial approach to oncologic emergencies						
Executes invasive diagnostic / therapeutic procedures						
Evaluates response to treatment						
Evaluates toxicity of the treatment						
Indicates local treatment of metastatic cancer						
Classifies and register the new cases of cancer (RHC)						
Presents seminars						
Controls the ambulatory agenda						
Indicates and conducts adjuvant treatments						
Carries out the follow up						
Indicates and conducts hormonotherapy						
Carries out retrospective studies						
Carry out systemic treatment of the metastatic disease						
Carries out symptomatic control – clinical support – palliativism						
Presents works in conferences						
Participates, identifies problems and proposes alternatives in the organization of the service						
Evaluates and treats the onco-hematologic patient						
Guides the tracking of the cancer						
Knows and reviews administrative procedures – APAC						
Carries out combined treatments						
Indicates and conducts neoadjuvance						
Evaluates patients in clinical research						
Elaborates routines and conducts						
Presents course conclusion paper						

Autonomy in performance

lower

higher

## Chart 2

### Performances expected per semester

	1st Semester	2nd Semester
<b>1st Year</b>	<ul style="list-style-type: none"> <li>Carries out anamnesis/physical exam</li> <li>Carries out 1st appointment</li> <li>Carries out pharmacological control of the pain</li> <li>Carries out initial approach to the oncologic emergencies</li> <li>Manipulates chemotherapics</li> </ul>	<ul style="list-style-type: none"> <li>Executes invasive diagnostic/therapeutic procedures</li> <li>Evaluates response to treatment</li> <li>Evaluates toxicity of treatment</li> <li>Indicates local treatment of the metastatic cancer</li> <li>Presents seminars</li> <li>Controls the ambulatory agenda</li> </ul>
<b>2nd Year</b>	<ul style="list-style-type: none"> <li>Indicates and conducts adjuvant treatments</li> <li>Carries out the follow up</li> <li>Indicates and conducts hormonotherapy</li> <li>Carries out retrospective studies</li> <li>Carries out epidemiologic survey (RHC)</li> </ul>	<ul style="list-style-type: none"> <li>Carries out systemic treatment of the metastatic disease</li> <li>Carries out symptomatic control – clinical support – palliativism</li> <li>Presents works in conferences</li> <li>Participates, identifies problems and proposes alternatives in the organization of the service</li> </ul>
<b>3rd Year</b>	<ul style="list-style-type: none"> <li>Evaluates and treats the onco-hematologic patient</li> <li>Guides the tracking of the cancer</li> <li>Knows and reviews administrative procedures -APAC</li> </ul>	<ul style="list-style-type: none"> <li>Carries out combined treatments</li> <li>Indicates and conducts neoadjuvance</li> <li>Evaluates patients in clinical research</li> <li>Elaborates routines and conducts</li> <li>Presents course conclusion paper</li> </ul>

Dominating the necessary capabilities to achieve autonomy in the professional exercise with this level of complexity demands, in the experience of the Working Group members, several years of continued formation, in a process that does not end with the conclusion of the Medical Residency in Cancerology.

The Working Group understands that a formation of this nature demands the exposure to several practice scenarios, under the supervision of qualified preceptors, under the coordination of a clinical cancerologist with the title of specialist (TECA) and/or egress of a program of medical residency in Clinical Cancerology recognized by MEC. The development of a medical residency program oriented towards an integral and comprehensive formation is carried out, in the different practice scenarios, through activities that are appropriate to the development of the professional competence expected in each cycle of the formation (charts 1 and 2). In that sense, in the first cycle, the emphasis is on the performance in infirmary with constant supervision and in a variety of theoretical-practical activities, in symposiums, round tables, classes on relevant themes, conferences, tele-medicine/tele-education activities, in order to favor the development of the capabilities required for the performances related to the cycle. In the 2nd and 3rd cycles, the prioritization is gradually dislocated to the ambulatorial performance and to activities that favor the development of

the autonomy in the decision making process and the amplification of the resident’s general view of the clinical cancerologist’s role in the control of cancer in the country. Therefore, in those stages, the resident performs preferably in supervised ambulatorial attention, responds to opinions from other services and participates, whenever possible, in research projects and in management forums related to his/her field of work. A program oriented that way requires, for the development of the expected competence, a minimum time of rotation in each area of formation in Cancerology, with the dominium of capabilities of growing complexity in the perspective of a formation with excellence and oriented towards the integrality of the care.

**Table 2**  
Working hours in different scenarios, per residency year

	R1		R2		R3	
Ambulatory	25%	720h	50%	1440h	60%	1728h
Inpatient ward	50%	1440h	22%	634h	10%	288h
E.R/ intercurrences	10%	288h	10%	288h	5%	144h
Complementary activities	15%	432h	15%	432h	15%	432h
Radiotherapy			3%	86h		
Optional					10%	288h
<b>Total</b>		<b>2880h</b>		<b>2880h</b>		<b>2880h</b>

**3.4 Scenarios and contents of the formation**

The Working Group has defined scenarios and activities to be developed by the residents (attachment 4), throughout the formation, in order to gain the capabilities required to achieve the performances foreseen in each of the four areas that form the competence profile of the clinical cancerologist (Attachment 2). In the same way, it has defined the minimum cognitive contents for each “competence area” (Attachment 5) to be explored in the set of theoretical-practical activities developed during the formation.

Additionally, the multidisciplinary approach required for the excellence of the clinical management of cancer in all stages of its evolution is associated to the diversity of interventions for which the resident must gain experience. The Cancerologist’s formation requires, thus, the development of capabilities for the election of the most suitable alternatives of chemo-radiotherapy and cirurgical treatment in the course of the disease. In that sense, the Working Group proposes that Radiotherapy, Oncologic Surgery, Onco-hematology, Pathological Anatomy and Palliative Care are inserted in the programs of

Medical Residency in Cancerology, in the multiple scenarios of formation in the area, as a transversal disciplinary axis during the whole formation. The times of formation in those areas are incorporated, therefore, in the activities developed in the periods of rotation in the areas presented in Chart 4.

It is possible to observe, in the analysis of Chart 4, that a program of Medical Residency in Clinical Cancerology built that way has a minimum duration of three years.

## Conclusion

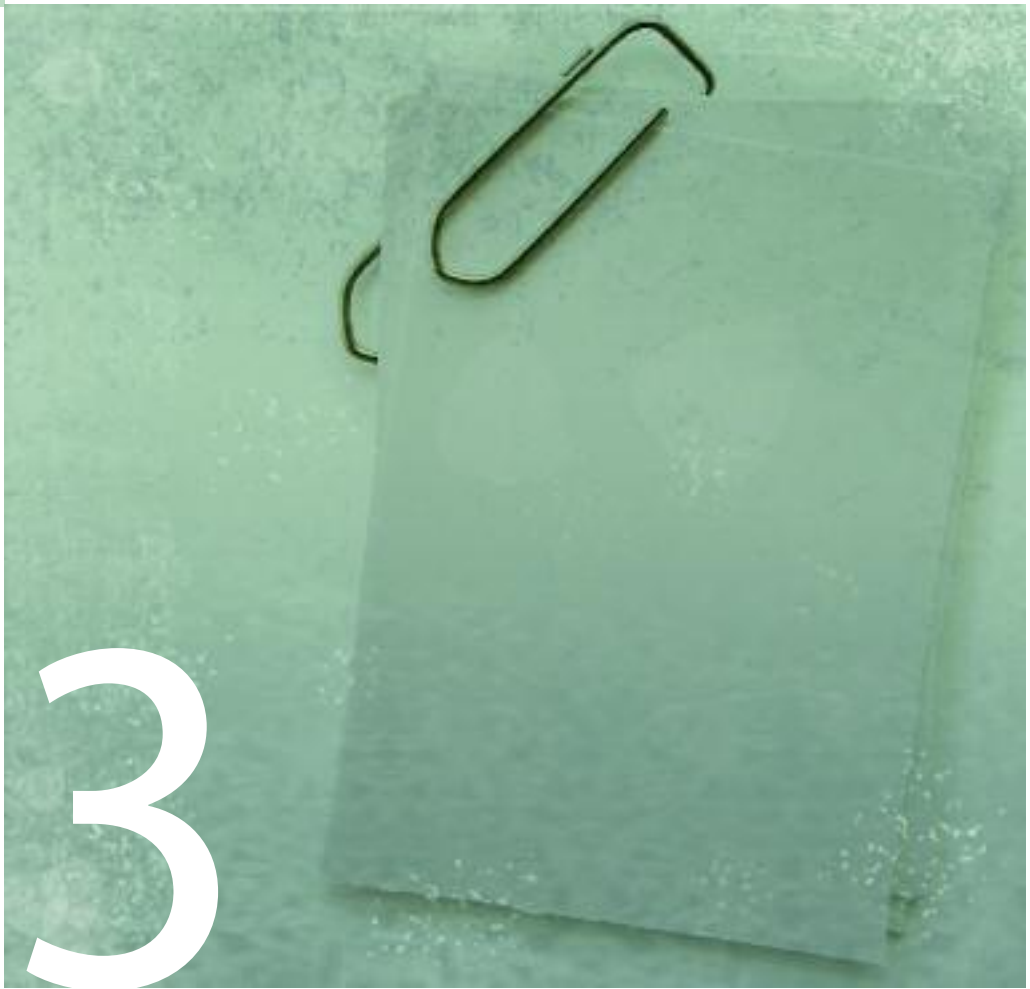
The present document-synthesis is the result of a hard process of collective construction – several meetings, moments of impasse, great willingness for dialogue and consensus. Such a big effort is justified by the relevance of cancer control in the country, a public health issue and an area of priority nowadays for the Health Department.

The dedication of all those involved in this process, in which the participation and leadership of the two “mater institutions” in Cancerology formation in the country – A.C. Camargo and INCA – is highlighted and expresses the commitment and preoccupation with the quality in the formation for the Oncologic Attention in Brazil. In that movement led by INCA’s Consultative Board (COSINCA), the educational institutions are decisively inserted, broadening the reflection and the possibilities in the construction of Medical Residency programs oriented towards the confrontation of the cancer problem in the country.

The elaboration of this document represents the end of a stage and announces the next challenge: implementing the necessary changes for the improvement of the quality in the formation of the Clinical Cancerologist.

Accepting that challenge implicates the amplification of the partnerships among educational institutions, ensuring the involvement of other spheres of the health and education areas, without which the legitimacy of the process does not have the strength of the legal value and as a guideline of public health.

In that sense, the recognition by the National Commission of Medical Residency (CNRM/MEC), instance responsible for regulating Medical Residency in the country, becomes essential for the continuity of the process of reorganization of the formation in Oncologic Attention in Brazil.



## Attachments

# Attachment 1

Institutions responsible for the indications and clinical cancerologists indicated for Workshop 2

- ABIFCC
- ABRAHUE (Brazilian Association of University and Teaching Hospitals)
- ABEM (Association of Medical Education)
- AMB
- CEREMERJ
- CFM (Federal Medicine Council)
- CMB (Mercy Houses in Brazil)
- CNRM
- CONASEMS
- CONASS
- Antônio Prudentes Foundation - A. C. Camargo Hospital
- Araújo Jorge Hospital - CC Goiás Association
- Manaus Cancer Hospital - FCECON
- Pernambuco Cancer Hospital
- INCA
- Porto Alegre Mercy House Sorority
- Paraná League of Cancer Combat (Liga Paranaense de Combate ao Câncer)
- MS – Strategic Inputs
- MS – Assistance Networks
- SEGETS / DEGES
- SBC
- SBCO
- SBOC
- Felício Rocho Hospital (MG)
- Celso Ramos Hospital (SC)
- Conceição Hospital (RS)
- Ofir Loyola Hospital
- Ceará Cancer Institute
- Amaral de Carvalho Hospital (Jaú)
- Radiotherapy Society
- ANMR
- Oncologic Nursing Society
- Anesthesiology Society
- Brazilian Society of Cancer Registers

## **II Workshop of Clinical Cancerology – INCA, May 2nd and 3rd, 2005**

- 1 • Jose Alberto Lopes Nogueira
- 2 • Carlos Eduardo Nogueira Rodrigues
- 3 • Livia Andrade Reis
- 4 • Matheos Chomatas
- 5 • José Augusto Rinck Júnior
- 6 • Marcia Vilela Gonçalves
- 7 • Tatiana de Fátima Vidal
- 8 • Gelcio Mendes
- 9 • Ana Luiza G. M. Wiermann
- 10 • Deisyamar Dolores Correa
- 11 • Marco Antônio Guimarães
- 12 • José Luiz M. Guimarães
- 13 • Lucilda Cerqueira Lima
- 14 • Inês Guterres
- 15 • Paula Cintia Machado Sampaio
- 16 • Rosane Oliveira de Sant'Ana
- 17 • José Getúlio Martins Segalla
- 18 • Ricardo José Marques

## Attachment 2

### General Chart: Competence Areas, Actions and Performances

#### COMPETENCE AREA 1: CLINICS

##### **1. Establishes care plan**

1. Carries out detailed anamnesis and physical exam aiming at the identification of tumoral disease, co-morbidities and risk factors (individual and family), establishing an empathic interpersonal relation in the clinical approach, open to the identification of the patient's singular needs in each moment of the evolution of the disease;
2. Critically analyzes the adequation of diagnostic and therapeutic clinical-surgical procedures previously carried out in terms of pertinence and reliability and investigates the extension of the neoplastic disease (staging) and the existence of co-morbidities for the decision making regarding the diagnostic and therapeutic plan;
3. Informs the patient in a clear and confident manner about the necessary phases of the diagnostic/staging/therapeutics with sensitivity and respect towards his/her values, needs and beliefs, establishing a trust relation in order to ensure the patient's comprehension of what he/she needs to know in order to participate in the most convenient decision making regarding the disease;
4. Actively participates in the multidisciplinary team in terms of elaboration of the therapeutic planning based on the critical and rational use of the knowledge, in the cultural and socio-economic context, listening to each patient's and his/her family's singular needs and their vision of the desired life quality, ensuring their participation in the decision making in the different moments of evolution of the disease;
5. Plans and executes the oncologic treatment (chemotherapy, hormonotherapy, immunotherapy and biotherapy) of clinical support in all indications (neoadjuvant, adjuvant, curative or palliative) monitoring the results obtained and the collateral effects with the objective of reaching the best therapeutic result minimizing the clinical complications and readequating the planning after each treatment cycle;
6. Properly informs the patients and their families about the interurrences of the treatment to be executed without neglecting the aspects related to sexuality and reproductive capability;
7. Orients patients and families, based on risk factors, in terms of the measures of health promotion, prevention and precocious detection of the cancer, prevention and control of co-morbidities;
8. Foresees possible sharp or chronic collateral effects, trying to minimize them.

## COMPETENCE AREA 1: CLINICS

### **2.** **Carries out the follow up**

1. Defines differentiated strategies for each context and carries out the patients follow up, considering the specificity of the condition, the psychological and socio-cultural aspects of patients and their families, the late side effects of the treatment and the appropriate types of exams and intervals necessary for the identification of recurrences, ensuring care in all dimensions of the attention;
2. Organizes, since the initial appointment, the attention to the necessity of palliation in all its several dimensions, with an amplified view of therapeutic possibilities, valuing the subjective aspects of those needs and orienting them according to the expectations of the patient and his/her family in terms of the desired life quality;
3. Elaborates strategies and acts in the palliation of the pain using, whenever possible, objective parameters for the follow up and evaluation of the therapeutic scheme, considering the cause of the pain, the stage of the disease, the socio-economic context, the family relations, valuing the subjective dimension of physical and affective losses, seeking, within the limits between risk and benefit, the best therapeutic alternatives in a individualized manner throughout the course of the disease;
4. Orients and conducts the investigation and treatment of interurrences related to specific complications of the disease and its treatment and elaborates strategies to prevent the occurrence and reduce the damage of such complications;
5. Shares the permanent demands of patients and their families with the members of the multiprofessional team in order to establish the healthy limits for the performance and to remain available and attentive to the patient's needs, ensuring the best quality in the care;
6. Orients and conducts the domiciliary care plan in cooperation with the multiprofessional team, deepening the comprehension of the way of life, the values, the social and domestic support that the patient has, and implementing interventions for his/her better life quality;
7. Elaborates and implements strategies of preparation for death, along with the multidisciplinary team, with the participation of the patients and their families, ensuring the support in the decision making and keeping available alternatives for the care during the final follow up of the patient;
8. Analyzes the adequation of therapeutic measures in terminal patients weighing the necessities for palliative intervention, avoiding futile treatments, in the perspective of the best death quality possible, within the psycho-socio-cultural and religious view of the patients and their families.

## COMPETENCE AREA 2: MANAGEMENT

### 1. Identifies the necessity of organizing the service

1. Actively participates in the definition of the necessities of the service for the improvement of the quality of the integral medical assistance rendered to oncologic patients;
2. Stimulates the use of cancer hospital registers, valuing the quality of the data generated in the institution and its importance in the construction of relevant information;
3. Identifies requirements of physical restructuring of the assistance units of the Institution (bed arrangement, human and technological resources and others) for the integral attention to the patients' needs, analyzing the adequation of the infrastructure for the continuity of the care by the multiprofessional team in the different stages of evolution of the disease, until the death.

### 2. Intervenes in the problems of the organization and operationalization of the service

1. Mobilizes, based on the best cost-effectiveness, the resources available in order to contribute to the resolution of the problems identified in the organization and the operationalization of the care to oncologic patients;
2. Actively participates in the organization of the service flow and the scheduling of patients with attention to the needs and expectations of the patients and their family, the staging of the tumor, the seriousness and phase of the disease, considering the socio-economic context, the regional demands and the individual characteristics and personal limits of the professional team and the Institution.

### 3. Monitors and evaluates the results of the oncologic care in the service

1. Evaluates, through indicators, the quality of the ambulatory hospital attention, sharing the results obtained with the multiprofessional team for the continuous improvement of the care practices in order to subsidize the refinement of the indicators and the learning process of the teams. In order to accomplish so, listens carefully to the staff, the multiprofessional teams, the patients and their families, in terms of the quality of the care in the unit;
2. Participates in the evaluation and proposal of initiatives to optimize and rationalize the distribution of material and financial resources among the several sectors of oncologic attention in the institution.

### 4. Participates in the actions of cancer control in the services network

1. Identifies leaderships in other assistance units in order to organize reference and counter-reference flows and to contribute with the amplification and development of the capabilities for the decentralized follow up of the patients;
2. Participates in the process of interinstitutional cooperation, in the recognition of his/her educational, social and political role, strengthening decentralized actions of prevention, control and attention related to cancer, amplifying, in all opportunities, the visibility of the cancer as a public health problem, contributing to the planning and management in that area. Orients his/her actions in that sphere according to the priorities derived from the regional epidemiologic profile;

Continue ...

**4. Participates in the actions of cancer control in the services network**

3. Actively participates in the management decisions referring to the therapeutic schemes offered in the institution and in the health system according to the protocols of regulamentation and the rules of financing of the SUS, considering the available budget resources, seeking the best cost-effectiveness, the improvement of the quality and equity of the access to cancer treatment, suggesting budget adequations for the necessary additions.

**COMPETENCE AREA 3: EDUCATION**

**1. Identifies individual and collective learning necessities**

1. Elaborates and implements educational actions along with domiciliary caretakers and health professionals of all levels, articulated with the health services to ensure the continuity of the attention to the patient, in reference and counter-reference flow, in an integral and decentralized manner;
2. Promotes and participates in educational actions based in the identification of his/her learning necessities, as well as in the multidisciplinary teams, considering the dynamic knowledge production in the distinct cancerology areas, aiming at optimizing the treatment and the orientation of the patient, his/her family and the caretakers;
3. Organizes and participates in teaching learning activities in service, promoting the educational dimension of clinical sessions and service meetings, exploring such spaces as learning moments for the multiprofessional teams in terms of the improvement of the quality of the oncologic attention.

**2. Participates in knowledge diffusion activities**

1. Appropriately communicates in spaces of technical-scientific diffusion, divulgating the findings of the production and critical evaluation of the knowledge in the cancerology area;
2. Participates in initiatives of diffusion of qualified information for the promotion of health, prevention and control of cancer along with the multidisciplinary teams, patients, caretakers, families and community, recognizing the necessity of the use of different languages, contributing to overcome the prejudice and stigmas and to the correct interpretation of information transmitted by the several means of communication.

**COMPETENCE AREA 4: RESEARCH**

**1. Evaluates and produces knowledge in the area of cancerology**

1. Uses tools of critical knowledge evaluation to verify the pertinence of the adoption of new clinical and cirurgical conducts in cancerology;
2. Actively participates in initiatives of knowledge production and in the evaluation of new therapeutics guided by ethical principles and by a solid comprehension of the scientific method and by the demands of the Brazilian population.

## Attachment 3

### Components of the Working Group of Educational Institutions

REPRESENTATIVE	INSTITUTION
Adelaide Machado Portela	Manaus Cancer Hospital - FCECON
Alberto Pereira da Silva	Ceará Cancer Institute
Alexandre José da Silva Fenelon	Belo Horizonte Mercy House
Ana Carolina Guimarães Castro	UFMG Clinics Hospital
Augusto Mota	Bahia Mercy House
Cássio V. A. Borges	Mário Kroeff Hospital
Enaldo Melo de Lima	SBOC
Felipe Osório Costa	FCM – UNICAMP
Gélcio L. Q. Mendes	National Cancer Institute
João Nunes de M. Neto	Brasília University Hospital
José Luiz Guimarães	Conceição Group
José Getúlio Martins Segalla	Amaral Carvalho Jaú Hospital (SP)
Júlio César Prestes	PUC – CAMPINAS
Jurema Telles	FCM – UPE
Karla Assunção de Carvalho Emerenciano	Norte Riograndense League against Cancer
Luiz Adelmo Lodi	Mário Pena Foundation
Marcelo Rocha S. Cruz	PUC – CAMPINAS
Nils G. Skare	Erasto Gaestner Hospital
Rodolfo Coutinho Radke	Porto Alegre Mercy House Sorority
Rogério Agenor de Araújo	UFU – Uberlândia
Sérgio J. Azevedo	HCPA
Wenzel Castro de Abreu	Araújo Jorge Hospital – Association of Cancer Combat in Goiás

## Attachment 4

### Teaching-Learning scenarios and activities of the Program

The resident enters the educational institution with pre-requisite of 2 years in Internal Medicine carried out in a Service recognized by MEC, being therefore a specialist general practitioner.

During the proposed three years of formation, the resident must participate in a common set of activities in ambulatory, admission units and emergency care scenarios, independently from the area. What differentiates each year from its subsequent is the level of autonomy in the practice obtained by the resident and the complexity of clinical situations under his/her responsibility. In all situations and contexts, therefore, he/she must gain capabilities to reach the performances foreseen for his/her competence profile as a clinical cancerologist.

The abilities previously defined as essential in the formation of the clinical cancerologist doctor must be acquired in all scenarios of his/her formation. We understand as scenario not only the physical space where the practice is carried out, but the whole set of material and human conditions for the care related to that space. The scenarios are characteristic and unique for each institution, and their particularities must be respected, based on minimum criteria duly regulated by the Education and Culture Department (MEC). The definition of specific scenarios of the formation in clinical cancerology does not suggest the creation of physical spaces and services (or departments) that do not currently exist in the institutions that offer medical residency in cancerology, but the promotion of conditions of utilization of the existing scenarios and the complementation, through exchanges, of each institution's gaps in particular.

The analysis carried out by the Working Group of the set of scenarios used nowadays in the programs of medical residency in clinical cancerology in the country aiming at the formation of the desired profile results in the proposition of the following obligatory and optional areas of formation and training:

#### AREAS OF FORMATION AND TRAINING

##### **1. ADULTS ADMISSION UNIT (obligatory)**

It is a consensus that the resident doctor should provide attention to patients in beds for admission of oncologic patients. The institutions credentialed for medical residency in

clinical oncology must obligatorily make specific beds available for such patients.

## **2. ONCOLOGY AMBULATORY (obligatory)**

Clinical cancerology has a strongly ambulatorial activity, result of the technological development observed in the past two decades. Therefore, the institution must obligatorily have a specific ambulatory for attention in clinical cancerology.

## **3. URGENCY/EMERGENCY/ONCOLOGIC EMERGENCY CARE (obligatory)**

The pedagogic importance of activities developed in urgency and emergency situations is recognized. Such activities must be developed at the institution. It should be highlighted the fact that the specific focus of this activity is to mobilize theoretical-practical knowledge of clinical oncology related to cancer patients in risky situations.

## **4. RADIOTHERAPY (obligatory)**

It is a consensus that the cancerologist in process of formation must participate in the functioning routine of a radiotherapy service, at the institution or at one of its partners, as a form of acquiring the basic notions of indications, treatment and follow up of patients under radiotherapeutic treatment.

## **5. ONCO-HEMATOLOGY (obligatory)**

It is recognized the importance of acquisition by the cancerology resident doctor of theoretical and practical knowledge in the area of treatment of malign hematologic diseases. This training contemplates activities of ambulatorial attention and in units of admission of patients with onco-hematologic diseases, organized according to the institution's characteristics.

## **6. PAIN AND PALLIATIVE CARE (obligatory)**

It is fundamental for the cancerologist to have wide knowledge in the area of palliative care and appropriate treatment of the pain related to cancer. This activity may be developed in the scope of other theoretical-practical activities, as well as in a specific ambulatory at the institutions where this service is available.

## **7. PATHOLOGY/PATHOLOGICAL ANATOMY (obligatory)**

It is a consensus the importance of acquisition of general and specific knowledge in the area of pathology/pathological anatomy by the cancerologist in process of formation, although it is not obligatory the presence of the resident doctor in the pathologic anatomy service in the form of an internship. Multidisciplinary clinical sessions represent a privileged space for learning in that area.

## **8. ONCOLOGIC SURGERY (obligatory)**

It is recognized the importance of basic notions of oncologic surgery for the clinical oncologist. We understand that, considering the characteristics of the clinical cancerologist's work, that knowledge may be acquired in multidisciplinary clinical sessions throughout the training.

## **9. PEDIATRIC ONCOLOGY (obligatory)**

We recognize the importance of the clinical cancerologist's knowledge of the main neoplasias faced by the pediatric population, as well as their characteristics. The contents in the area of pediatric cancerology may be explored in an optional internship, which may be carried out at the institution or at one of its partners.

## **10. BONE MARROW TRANSPLANTATION (obligatory)**

The transplantation of bone marrow may be explored in an optional internship, carried out at the institution or at one of its partners.

## **11. INSTITUTIONAL PROTOCOLS AND CLINICAL RESEARCH (obligatory)**

According to the possibilities and characteristics of the institution, it is strongly recommended for the resident doctors to participate in the revision and development of protocols and activities in research projects.

# THEORETICAL-PRACTICAL ACTIVITIES

## **AMBULATORY**

- Elaboration of anamnesis and loco-regional exam of the patient
- Discussion and elaboration of diagnostic hypothesis; request of complementary exams
- Staging
- Discussion of clinical cases
- Invasive diagnostic/therapeutic procedures: biopsies, punctions, extractions, etc.
- Urgency/emergency cases of interned patients or patients forwarded to the ambulatory
- Scheduling of appointments/therapeutic procedures
- Request for informed consent
- Responses to opinion requests
- Register of information according to patterns of the cancer hospital register system

## **ADMISSION UNIT**

- Attention to interned patients (anamnesis and physical exam)
- Evaluation of complementary exams
- Care provided to patients undergoing oncologic treatment and its interurrences
- Daily visits with diagnostic and therapeutic discussions
- Orientation and nursing procedures, evolution, exam requests and prescriptions
- Evolution of interned patients and register of obits
- Orientation and discharge summary
- Prontuary organization

## **URGENCY ATTENTION**

- Attention to oncologic patients in urgency and emergency units
- In general hospitals, attention to emergency cases, being the resident's intervention requested by the sector team when there is the necessity of evaluating oncologic cases, under the supervision of assistants
- In specialized hospitals, carries out emergency care of oncologic patients

## **COMPLEMENTARY DIDACTIC ACTIVITIES**

- In person or distance theoretical classes
- In person or distance group discussions
- Multidisciplinary clinical sessions
- Anatomico-clinical sessions
- In person or distance education mini-courses
- Magazine club
- Active search for scientific sources
- Rounds
- Case supervision
- Discussion of clinical cases
- Supervised visits
- Round tables
- Demonstration and supervision of procedures
- Dramatization
- Participation and discussion in clinical research
- Participation in internships in specific activities (dilution center, cancer register, laboratories, research units)

# Attachment 5

Cognitive attributes by competence area

## CLINICAL COMPETENCE AREA

1. Concepts of malign and benign neoplasies
2. Normal processes of cell division and the neoplastic processes
3. Tumoral immunology
4. Carcinogenesis
5. Anatomic-pathologic classification and neoplasm nomenclature
6. Kinetics of the neoplasies
7. General pathophysiology of malign neoplasies
8. Cancer epidemiology
9. Etiology, tracking and prevention of cancer
10. Cytologic and anatomic-pathologic diagnostic of cancer
11. Laboratory diagnostic of cancer
12. Radiologic aspects of neoplasies
13. Staging
14. Basic concepts of nuclear medicine, radionuclides and instrumental nuclear medicine
15. Applications of nuclear medicine in Cancerology
16. Radio sensitivity and radiocurability
17. Therapeutic planning in radiotherapy
18. Collateral effects and complications of radiotherapeutic treatment
19. Sequels in Radiotherapeutic treatment and their prevention
20. Principles of Radio/Chemotherapeutic treatment
21. Endoscopic procedures in malign neoplasies
22. General principles of Oncologic Surgery – Diagnosis and surgical staging
23. Concepts of operability and resectability
24. Basic concepts of ionizing radiations and radiation generators
25. History of chemotherapy – Selection and Evaluation of chemotherapeutic agents
26. Quantitative study of kinetics in experimental tumors and human beings
27. Main action mechanisms and classification of antineoplastic drugs
28. Principles of dosage evaluation and schemes for administration of antineoplastic drugs
29. Basic principles of antineoplastic chemotherapy
30. Monoclonal antibodies
31. Basic principles and results of intracavitary chemotherapy
32. Basic principles of small inhibiting molecules of the tyrosine-kinase system

- 33.** Basic principles and results of intra-arterial chemotherapy
- 34.** Principles of target-molecular biological therapy
- 35.** Changes in the host's defense mechanisms during the use of antiproliferative drugs
- 36.** Antiproliferative Chemotherapy in pediatrics
- 37.** General principles of the reduction of toxicity in antiproliferative chemotherapy
- 38.** Basic principles of humoral and cellular immunity
- 39.** Antigen blocking agents, specific tumors and tests for assessing the immunologic capability
- 40.** General principles of immunotherapy in cancer
- 41.** Supportive treatment: nausea and vomiting, organ protection, mucositis, malignant strokes, leakage, paraneoplastic syndromes and nutritional support
- 42.** Infectious complications in a cancer patient
- 43.** Prophylaxis and treatment of infestations
- 44.** Psychological aspects of the cancer patient
- 45.** Oncologic emergency
- 46.** Treatment of oncologic pain
- 47.** Bisphosphonates
- 48.** Bone marrow growth factors
- 49.** Bone marrow transplantation principles
- 50.** Hemotherapy principles
- 51.** Genetic counseling
- 52.** Late complications: endocrine dysfunctions and risk of a second neoplasm induced by the oncologic treatment
- 53.** Chemoprevention
- 54.** Supportive and palliative care of the terminal patient
- 55.** Rehabilitation
- 56.** Administration of anticancer agents
- 57.** Bioethics
- 58.** Invasive procedures: lumbar puncture, Ommaya reservoir, paracentesis and thoracentesis, administration of drugs through subcutaneous reservoir; aspirative puncture through thin needle; myelogram, biopsy of the iliac crest.

## **MODULES OF TUMORAL BIOLOGY**

- 1.** Leukemia
- 2.** Lymphoma
- 3.** Myeloma
- 4.** Sarcomas (bones and soft parts)

- 5.** Skin cancer (melanomas + non-melanomas)
- 6.** Gynecological (ovary, uterus, cervix, vulva and vagina)
- 7.** Breast tumors
- 8.** Lung tumors
- 9.** Mesothelioma
- 10.** Central Nervous System tumors
- 11.** Endocrine tumors
- 12.** Head and neck tumors
- 13.** Digestive tract tumors (esophagus, stomach, colon-rectal, small intestine, anus, pancreas, liver)
- 14.** Male genital apparatus tumors (penis and prostate)
- 15.** Genito-urinary apparatus tumors (kidney, urothelial, germinative cell tumors)
- 16.** Unknown primary site tumors
- 17.** Malignities associated to AIDS
- 18.** Pharmacology

## COMPETENCE AREA: EDUCATION

The subjects of the health educational practice; relations between information, communication and education; culture and representations of the health, disease, death process; dialogic educational practices and knowledge reconstruction; significant learning; evaluation of the teaching-learning process; identification of the learning necessities; learning to learn and permanent education; practices of communication of scientific works.

## COMPETENCE AREA: RESEARCH

Tools for a practice based on evidences; information sources and main health database; formulation of a clinical question; search for evidences in the main sources of information; critical evaluation of articles on etiology/risk, diagnostic tests, treatment, prognostic; systematic reviews, meta-analysis and guidelines; occurrences among individuals and

population in time and space; observations, cases and variables; exposure, determining factors and closures; causality in chronic diseases and in cancer; design of observational and experimental studies; proportions, ratio and rates; main measures of effect, relative risk, odds ratio; characteristics and validity measures of diagnostic tests; post-test probabilities; measurement precision; sample processes and representativeness; trust intervals; hypothesis tests; measurement validity; strategies for interaction and confounding; randomization, restriction, pairing, stratification and multivaried regression; survival studies.

## COMPETENCE AREA: MANAGEMENT

Quality in health: structure, process and results; quality and production indicators in oncologic assistance; identification of necessities of clinical services; instruments and processes of hospital management; management and organization of the work in multiprofessional teams in clinical cancerology; organization of oncologic procedures, cancer management and hospital register systems; cost assessment in oncologic assistance.

## Bibliographic References

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INCA, 2006 estimates

Administrative measures 741 and 2349

# 4

## Project: Development and Evaluation of Competence-Oriented Programs of Medical Residency in Clinical Cancerology

### Introduction

The approval by MEC's National Commission of Medical Residency of the Competence-Oriented Residency in Clinical Cancerology Course Program, which foresees the formation of a professional profile built with the participation of SBOC, SBC, SUS managers and service renderers, and the application of a program elaborated by 21 educational institutions in the country, imposes the development of initiatives of evaluation and improvement of the quality of the credentialed programs in order for the professionals' certification to ensure the intended

excellence. The present project proposes the development of initiatives of faculty evaluation and development oriented towards that objective, counting on Prof. Stewart Mennin's advice.

## Objectives

The intended objectives are:

- Developing a program of resident evaluation based on performance with coordinators and tutors from credentialed programs;
- Building a program of faculty development, ensuring the domain of somative and formative evaluation tools;
- Developing a task group of program evaluation;
- Favoring the recognition of the initiatives of faculty formation in the Continued Education Program of the Brazilian Society of Clinical Oncology (SBOC).

## Methodology

The project foresees the achievement of its objectives through a strategy of collective construction with the educational institutions and the adoption of active teaching-learning methodologies that are coherent with the proposal of construction of the professional competence. The plan should be understood as the first stage of a medium term project, which should seek the sustainability of its actions for the period of at least five years.

The proposed action plan includes:

**Objective 1:** Developing a program of resident evaluation based on performance with coordinators and tutors from credentialed programs

1. Developing and applying an online questionnaire aiming at the identification of the existing instruments and practices of evaluation;
  - 1a. Carrying out interviews with 2 coordinators from credentialed medical residency programs;
  - 1b. Evaluating the instruments of evaluation used in the programs;
2. Analyzing and elaborating a report on the data collected through the questionnaire;

3. Organizing Workshop 1 “Identification of performance levels expected by the clinical oncology formation program”;
4. Organizing Workshop 2 “Evaluation tools for the formative and somative evaluation of the clinical oncology resident”.

**Objective 2:** Building a program of faculty development, ensuring the domain of somative and formative evaluation tools

1. Carrying out faculty training for the use of standardized tools in the credentialed programs;
2. Establishing cooperation with international institutions aiming at being able to count on the collaboration of experts in evaluation instruments;
3. Analyzing the resident evaluation data with the introduction of new instruments;
4. Carrying out the follow up of the faculty development program;
5. Carrying out periodic regional events of evaluation of the quality of the programs.

**Objective 3:** Developing a task group of program evaluation

1. Planning the evaluation of the programs of medical residency in clinical oncology;
2. Organizing the program of continued improvement of the quality contemplating the valuing of the academic and faculty development, research in medical education, development and evaluation of the curriculum.

**Objective 4:** Favoring the recognition of the initiatives of faculty formation in the Continued Education Program of the SBOC

1. Establishing a credit program for the workshops of faculty evaluation and development.

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