



Cancer control in Brazil in the first half of the twentieth century

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Abstract

This discussion of public efforts to control cancer in Brazil from the 1920s to the close of the 1940s . Examines the process that led to creation of the Inspectorship for the Prevention of Leprosy and Venereal Diseases within the National Department of Public Health. The establishment of this agency was Brazil's first public action targeting cancer and, while not far-reaching, it enables us to understand the professional field of cancer at that time. The article also points to the role played by electrosurgery, whose diffusion fueled medical interest in cancer and thus contributed to the founding of the Cancerology Center in the Federal District. An exploration of the founding of the National Cancer Service and its first decade of activities endeavors to draw a link between the Service's early profile and the issues that guided its history.

Keywords: history of public health; history of medicine; cancer control; history of disease.

In his classic study of the history of the fight against cancer in France, Patrice Pinell (1992) notes that the social perception of the disease underwent a transformation at the turn of the nineteenth to the twentieth centuries. As an aging population pushed the incidence of the disease higher, government and philanthropic institutions related to patient care, medical societies dedicated to the disease, specialized hospitals, and research centers began to appear. Whereas cancer had previously been seen as something rare and exceptional, it became viewed as an increasingly present problem and a veritable threat to society, given its high rate of incidence and its deadliness. The transformation noted by Pinell was not limited to France but applied as well to the United States and to other countries in Europe, where efforts were made to create similar institutions. The dynamics of the scientific world, with its meetings and publications, likewise spurred the globalization of these concerns.

This apprehension about cancer soon found echo among Brazilian physicians, first through studies of an epidemiological nature that tried to demonstrate that the disease was an evil of the modern world and would soon reach Brazil (Teixeira, in press). In the early 1920s, these concerns saw philanthropy and government initiative come together to set up specific spaces for patient treatment, while the government took its first actions in the realm of cancer, meant to inform the public about prevention and obtain a better picture of the incidence rate in Brazil. But despite the date of these early initiatives, government actions targeting cancer remained few and far between throughout almost the entire first half of the century, most often coming in response to initiatives by individuals or professional groups who wanted to make the disease an object of attention within the public health sphere. This situation only started changing in the late 1940s, with the progressive development of the National Cancer Service (*Serviço Nacional do Câncer*, or SNC) and its Cancer Institute (*Instituto de Câncer*).

An analysis of the historical period featured in this article casts light on how a group of specialists and some of its leaders played roles in the shaping of a cancer control policy in Brazil. I endeavor to show how these professionals – at first dermatologists and then surgeons, in conjunction with pathologists and epidemiologists – were responsible both for the molding of anti-cancer efforts during the period and, to a large extent, for the direction cancer policies were to take in the subsequent period as well.

Dermatology, cancer, and public health

In the late 1910s, a major transformation took place in cancer control in Europe and the United States, entailing heavier reliance on radiotherapy as a specific form of cancer treatment. This therapy had emerged in the late nineteenth century following the Curies' discoveries in the field of chemistry, but for quite some time doctors held reservations about the technique, which was used only on a small scale, mainly to treat dermatological problems or as a palliative to reduce inoperable tumors. The 1920s brought greater mastery of the new technique, broadening its use and making it an alternative to surgery or even the treatment of choice in certain specific cases (Pinell, 1992; Pickstone, 2007).

Brazil was not indifferent to these events. In the late 1910s, radiotherapy began attracting the eye of some physicians, particularly dermatologists working with skin cancer. The connection between cancerology and dermatology was the basis for the eventual establishment of a cancer control agency as part of Brazil's first national public health organization.

The development of dermatology as a research area in Brazil dates to the early twentieth century, when dermatological research interacted with the emerging areas of experimental medicine, like microbiology and tropical medicine, and they in turn came into contact with the most dynamic centers of biomedical research in Brazil, located at institutes in Rio de Janeiro and São Paulo.¹ When dermatologist Fernando Terra joined the Rio de Janeiro Faculty of Medicine (Faculdade de Medicina do Rio de Janeiro) in 1906, he ushered in an era of renewal in dermatological teaching and research. With the 1912 foundation of the Brazilian Society of Dermatology and Syphilology (Sociedade Brasileira de Dermatologia e Sifilografia), likewise the brainchild of Fernando Terra, the community of dermatologists strengthened its process of institutionalization by creating new publications, promoting scientific events, and forging new institutional spaces, all involving a diversity of research groups from different states (Carrara, 1996).

A central figure of these events was physician Eduardo Rabello, a recognized authority in the fields of dermatology and syphilology and the individual mainly responsible for turning cancer into a public health issue.² In 1914, as secretary of the Brazilian Society of Dermatology and Syphilology (Sociedade Brasileira de Dermatologia e Syphilology), Rabello was commissioned by the General Directorship of Public Health (Diretoria Geral de Saúde Pública, or DGSP) to travel to Europe to study the measures adopted to combat syphilis there. He became interested in radiotherapy while in Paris, and upon his return to Brazil suggested to his faculty colleagues that an institute be created to provide radiological treatment of cancer and professional training in the field. His goal was achieved in 1919, when he and Fernando Terra founded the Rio de Janeiro Faculty of Medicine's Radiology Institute as a part of the dermatology clinic they then headed. Thus was born Brazil's first public service aimed solely at caring for cancer patients (Costa Junior, 1921).

As an infirmary of Rio's Mercy Hospital (Santa Casa da Misericórdia) and a clinic at the Faculty of Medicine, the Radiology Institute was primarily devoted to treatment and training. Before it had completed its second year in operation, it had provided radiological treatment to over 300 patients, not limited to dermatological cancers. In fact, the main cancers handled there were of the digestive tract, face, breast, and cervical (Costa Junior, 1921). In addition to the regular activities of the Institute, it also made a vital contribution to treatment and clinical research by allowing physicians interested in the new technology to use its facilities and equipment.³

Although the Radiology Institute came into being as part of the expansion of the field of dermatology at the Rio de Janeiro Faculty of Medicine – much as occurred in England in the early twentieth century (Pickstone, 2007) – Brazilian dermatology gradually grew restricted to cutaneous cancers. But during the Institute's founding days, dermatology was central in bringing the disease into public health initiatives. Let us explore how this process took place.

In the late 1910s, Brazil inaugurated a sanitary reform process intended to expand the geographic radius of federal health services and integrate into its activities programs focused on previously neglected endemic diseases. The November 1919 establishment of the National Department of Public Health (Departamento Nacional de Saúde Pública, or DNSP) to replace the former General Directorship of Public Health was a landmark in this process. The new agency was nationwide in scope and included fields of activities not yet encompassed in the Brazilian public health sphere, like industrial and food hygiene. Two inspectorships were created to address the prevention of specific diseases, one to control tuberculosis (limited to what was then the Federal District) and the other concentrated on venereal diseases, leprosy, and cancer (Brasil, Dec. 31, 1923).

The Inspectorship for the Prevention of Leprosy and Venereal Diseases (Inspetoria de Profilaxia da Lepra e das Doenças Venéreas) was charged with compiling cancer death statistics in order to obtain more accurate incidence rates. Because it was thought that cancer might be a contagious disease, the agency's founders included as one of its activities the disinfection of households where someone had died of cancer (Sanglard, 2008). Also in the plans were free diagnostic laboratory exams and an educational campaign on the disease, using pamphlets, conferences, and educational exhibits. Lastly, under the terms of the regulation establishing the Inspectorship, it could work together with philanthropic agencies to found cancer institutes for treatment and experimental research (Brasil, Dec. 31, 1923).

It should be explained why cancer was one of the Inspectorship's objects of concern, since the key public health issues in the late 1910s were rural endemic diseases with the highest rates of incidence, like malaria and worms. In terms of urban diseases, the focus was on tuberculosis and syphilis and, to a lesser extent, leprosy; in the minds of many doctors, these maladies accounted for the degeneration of the Brazilian population and stood as prime obstacles to the country's development. Cancer was not considered quite so important because its rates of incidence had not reached very significant levels yet. Furthermore, it did not appear to be hereditary and thus to pose a degenerative risk to the Brazilian population (Teixeira, in press).

Under the 1919 reform, the thread that tied these diseases in with cancer and made them especially worrisome in public health terms was the belief that they could spread very easily. Because tuberculosis rates were high in poor, crowded areas, it was the leading public health problem. It was well known that syphilis was a sexually transmitted disease, thought to be spreading rapidly. Leprosy was considered contagious, although its means of transmission was unknown. Many doctors back then believed cancer was transmitted in much the same way as leprosy, and since statistics in Brazil, like those abroad, seemed to show that rates were climbing steadily, more diligent monitoring was needed as part of the effort to devise ways to halt its dissemination (Rabello, 1922).

The other factor that tied syphilis, leprosy, and cancer together and placed them in a single agency was the medical specialty linking them. Because leprosy and syphilis manifested cutaneously, they were studied at dermatology classes in medical schools. Dermatologists were particularly interested in both diseases, engendering a community of specialists with a high degree of institutionalization (Carrara, 1996; Cunha, 2005). Syphilologists and, later, leprologists enjoyed great academic prestige; they were active participants at

international congresses and published papers in the leading periodicals on these diseases. At a time when dermatologists were growing increasingly interested in cancer, given the development of radiotherapy, it is no surprise that the disease was assigned to the agency dealing with the foremost illnesses of concern to dermatologists.

I would also like to highlight Eduardo Rabello's personal role in creation of the Inspectorship. As we saw earlier, he had won great renown in the fields of dermatology and syphilology. He also maintained excellent relations with the group of physicians that shaped the public health reform and was quite possibly co-responsible for this endeavor (Sanglard, 2008; Teixeira, in press). When cancer was included among the Inspectorship's diseases, it effectively placed all of the disciplines in Rabello's professional field under one roof within the Department of Public Health, allowing him to explore the most important diseases in his specialty (Teixeira, in press).

Lastly, cancer became part of this Inspectorship because it was associated with a public health project that benefitted from philanthropic support for establishing hospitals and research centers. Starting in 1921, physician Carlos Chagas, idealizer of the DNSP and its first director, began negotiating funding to build a large VD hospital in Rio de Janeiro; Chagas worked together with Eduardo Rabello to obtain financing from industrialist and philanthropist Guilherme Guinle for what would become Gafrée e Guinle Hospital, inaugurated in the neighborhood of Tijuca in 1929 (Sanglard, 2008). The following year, Guilherme Guinle stepped forward to finance construction of the first cancer hospital in the Federal District; but although he applied himself to the project for over ten years, it never got off the ground and the hospital was never built. In line with Sanglard, I believe that the fact that Chagas might be able to count on philanthropic help from the Guinles as allies in structuring one part of the public health sector had a fundamental influence on the decision to include cancer as a medical problem worthy of greater government intervention.

Throughout its entire existence, the Inspectorship accomplished very little in regard to cancer, other than standardizing death certificates to obtain more reliable statistical data⁴ (Teixeira, in press). Although establishment of this agency marked the moment when cancer joined the list of public health concerns, its meager action in this arena reflects the peculiar reasons behind its inclusion. It was dermatologists' professional interest in an expanding field that placed cancer alongside other diseases under the umbrella of this Inspectorship. At the same time, the only thing public health expected from the agency back then was an ability to understand and control the transmission of a possibly contagious disease and count on philanthropic sources in creating a treatment institute

Broadening perspectives

Despite the inefficacy of the Inspectorship, medical concern over cancer rose substantially during the 1920s, sparking a number of initiatives. The Belo Horizonte Radium Institute (Instituto do Radium de Belo Horizonte) was founded in the capital of the state of Minas Gerais in 1922 and operated in conjunction with the state's Faculty of Medicine. In 1929, an institute with much the same profile opened its doors in São Paulo: the Dr.

Arnaldo Institute was sustained by a philanthropic agency and operated out of São Paulo's Central Mercy Hospital (Hospital Central da Santa Casa da Misericórdia de São Paulo) (Teixeira, Fonseca, 2007). That same year, Rio de Janeiro was host to what I believe to be Brazil's first scientific meeting on cancer. The idea of this Cancer Week, organized by the National Academy of Medicine (Academia Nacional de Medicina) in partnership with the Rio de Janeiro Society of Medicine and Surgery (Sociedade de Medicina e Cirurgia do Rio de Janeiro), was to raise cancer awareness among both doctors and the lay public. These initiatives show that the field of cancerology in Brazil was growing in size and complexity during this decade, coming to comprise a larger number of professionals and giving birth to cancer control institutions.

This interest grew more robust early the following decade, as is apparent in the emergence of the first leagues to fight the disease. In 1934, São Paulo physician Antonio Prudente established the São Paulo Association to Fight Cancer (Associação Paulista de Combate ao Câncer); that same year, in Rio de Janeiro, Ugo Pinheiro Guimarães founded the Brazilian League Against Cancer (Liga Brasileira Contra o Câncer). In 1936, gynecologist Aristides Maltez created the Bahian League Against Cancer (Liga Baiana Contra o Câncer). All three shared the goal of raising funds to build diagnostic and treatment centers; the first two also sought to organize educational campaigns on cancer prevention. These pioneer leagues served as models for similar institutions in widespread regions of the country.

Held in November 1935, the First Brazilian Cancer Congress (Primeiro Congresso Brasileiro de Câncer) represented the apex of this process. The event was an initiative of the Rio de Janeiro Society of Medicine and Surgery in celebration of its fiftieth anniversary; in addition to gathering studies underway from across the country, the congress was an attempt to convince public health authorities to define a cancer control policy. Not only was the event important for the medical field; it was also the stage for the announcement of a new public health project in the area of cancer. During the first session of the Congress, sanitary physician Barros Barreto, then director of the Ministry of Education and Health's National Health Department⁵, gave a presentation on the ministry's cancer guidelines. He stated that the task of controlling the disease should bring together various social groups and not confine itself solely to government action. Private initiative and civil society organized in the form of leagues should take it upon themselves to conduct a major campaign, while the State should act as an organizer, hand down guidelines, provide oversight, and collaborate with the funding needed to sustain existing institutions. The basis of cancer control should be prevention, achieved through sanitary education, while state governments should strive to create various diagnostic healthcare posts throughout the country, complemented by more sophisticated posts in some of the most populous states. The central government should be responsible for setting up a cancerology center in the Federal District, built around the services already offered at other institutions, like Rio de Janeiro's Mercy Hospital and its Faculty of Medicine (Barreto, 1936). In tune with the Vargas State's overall position on public health, Barreto saw the central government's role limited to planning, regulation, and initiatives that would complement philanthropic work. However, he stressed the need to expand both state-level and philanthropic actions in the realm of disease control. If public health policy had until then been restricted to a

quest for epidemiological data that would provide a better understanding of cancer, now it was time to establish a network of medical centers and hospitals focused on controlling it, in partnership with private initiative. Yet it would be nearly a decade before this proposal would head towards execution.

Cancer and surgery

While some dermatologists showed interest in cancer, the disease had been tightly connected to the work of surgeons ever since the development of modern surgery in the third quarter of the nineteenth century, since these doctors were the primary specialists in techniques for the ablation of tumors. During the 1920s, an important feature of this connection was an appreciation for one specific technique, that is, electrosurgery.⁶ Surgeons skilled in this method of operation were the leaders of cancerology during this period.

European surgeons had grown excited about electrosurgery in the early twentieth century, when the energy transmitted by the scalpel was imagined to have therapeutic effects (Pinell, 1992). This idea was soon discredited, but the procedure continued to be used in different operations, principally because it lessened bleeding by cauterizing tissue that came in contact with the scalpel. In Brazil, the method was used by a number of surgeons, at first to remove small cutaneous tumors and to operate mouth cancers. Dr. Francisco Eiras, specialist in throat diseases at Rio de Janeiro's Botafogo Polyclinic, was the first to submit a communiqué on the topic to the National Academy of Medicine, in which he presented the results of its application to a number of cases and also urged Brazilian physicians to take an interest in the new technology (Eiras, 1927).

Mario Kroeff, surgeon from Rio Grande do Sul, played a key role in disseminating electrosurgery. Owing to his efforts to establish treatment facilities in the Federal District and to his work in shaping a national cancer policy, he was a central figure in the subsequent history of cancer control in Brazil. Kroeff popularized the technique and created demand for it while also fueling social concern over the disease. These mutually reinforcing endeavors would prove determinant in the institutionalization of anti-cancer initiatives in the following decades.

In 1924, when Kroeff was on the staff at the Inspectorship for the Prevention of Leprosy and Venereal Diseases, he was commissioned to study European initiatives to fight syphilis. It was on this trip that he acquired an interest in electrosurgery, which some German physicians were using to treat cancers and other dermatological problems. He came back to Brazil with the equipment needed to start applying the new technique and in 1927 began using it to treat different kinds of cancer at Rio de Janeiro's Mercy Hospital. As compared to his European colleagues, Kroeff sought to apply the technology more broadly, against a number of types of cancer (Kroeff, 1971, p.203).

Kroeff's work gained greater recognition in 1928, when German surgeon Franz Keysser was in Rio de Janeiro. Chief of a surgical service in Berlin, Keysser had successfully built more powerful electrosurgery apparatuses. In Brazil, he donned the hat of a traveling salesman, approached Kroeff, and gave some demonstrations of his equipment at Mercy Hospital (Kroeff, 1947). Kroeff grew even more excited over the updated technique, which

seemed to promise new results when coupled with more modern equipment. After performing electrosurgery on many patients, in 1929 he published the thesis *Diatermo coagulação no tratamento do câncer* (Diathermal coagulation in cancer treatment), as part of the prerequisites for earning a chair at the Rio de Janeiro Faculty of Medicine (Kroeff, 1928).

Other surgeons would soon express their interest in the new use of electrosurgery. One of the most notable was Dr. Antônio Prudente, who was so impressed with Keysser's work that he went to Germany in 1929 to serve as an assistant at his surgery service. Prudente spent two years doing specialization studies there, and upon returning to Brazil began using the technique in his operations. Like Kroeff, Prudente devoted his professional activities towards addressing the 'problem of cancer' and began dedicating himself to establishing cancer control institutions and policies in São Paulo.⁷

Interest in electrosurgery enjoyed further growth in the 1930s, against a backdrop of closer relations between Brazil and Germany prior to World War II and of Mário Kroeff's increased clout following Getúlio Vargas' 1930 rise to power.

As we saw earlier, the First Brazilian Cancer Congress was held in Rio de Janeiro in 1935. Both Kroeff and Antonio Prudente – the latter as official representative of the state of São Paulo – gave papers on electrosurgery. Prudente's was on its use as a surgical repair technique in cancer cases, with a discussion of cases he had treated with it. Kroeff presented a revised version of his professorship thesis, expounding on electrosurgery's potential use with a wide gamut of cancer types. He also gave a second paper, which can be considered a proposal to use electrosurgery for cancer control in Brazil. Believing that a campaign based on regional cancerology centers would be unviable given the continental size of Brazil and the enormous economic problems in its countryside, Kroeff (1936) proposed that physicians in far-off areas be trained as the first line of defense against cancer by disseminating electrosurgery and teaching local doctors to apply it in simple cases. This reliance on the technique would be supplemented by urging these physicians to do laboratory exams and then mail their results from distant corners of the country to larger hubs. Centers modeled after European cancer institutes would be set up only in Brazil's biggest cities, where a variety of techniques would be used to treat the disease.

Kroeff believed the use of electrosurgery could produce a framework for medical action unlike that in place in a number of developed countries, especially France, where the rule was cancer centers that employed radiotherapy (Pinell, 1992). Although some doctors criticized Kroeff's notion because they believed it inappropriate for rural clinicians to conduct procedures that, to their thinking, demanded surgical specialization, the idea of an electrosurgery center was to become a reality not much later.⁸

In 1936, Kroeff and electrosurgery became the subject of much attention in Rio de Janeiro's media. German physician Franz Keysser was again in Brazil and thanks to the reigning pro-German atmosphere, his visit was treated like a major event. A number of newspapers did pieces on the doctor, who was even awarded the Order of the Cross by Getúlio Vargas himself (Kroeff, 1947). As mentioned earlier, Keysser had developed new electrosurgery equipment and perfected its forms of use. In 1931, he had written a book on the new technique, entitled *Die Elektrochirurgie*, and Germany had sent him on an official visit to Latin America in hopes of expanding the European country's influence on the continent.

The German doctor's visit also put Kroeff on center stage in the press, which had already labeled him Keysser's heir. A few months after Keysser left, Kroeff was back in the headlines in Rio with the release of his own book on electrosurgery. Based on his professorship thesis, *Tratamento do câncer pela eletro-cirurgia* (Cancer treatment using electrosurgery) was meant to disseminate the technique; it explained various aspects of the surgical method and underscored its importance as a cancer treatment tool. Like the visit by Keysser, Kroeff's book was a great success; a number of newspapers published items on it and the medical community sung its praises in professional periodicals (Kroeff, 1947).

This appreciation for electrosurgery in Brazil ran counter to what was happening at the main medical centers of Europe and the United States, where radiotherapy played a distinctly different role in framing the organization of cancer professionals in the period leading up to World War II (Pickstone, 2007). Applied by surgeons in the United States and by specially trained professionals in France and England, this technique was ever more often the preferred treatment for various types of cancer. Although there was no disagreement in Brazil about the value of radiotherapy, it was extremely hard for private initiative or philanthropic organizations to acquire radium and the government showed no interest in funding its purchase, a situation that tended to make surgery – and especially electrosurgery – the treatment of choice. In actual fact, few doctors used the procedure, and some even made veiled criticisms about its being overused, but social interest in the new technology and the resolute action of its main advocates fueled interest in cancer and laid the ground for new institutions for cancer treatment.⁹

The 1937 establishment of the Federal District Cancerology Center (Centro de Cancerologia do Distrito Federal) was Kroeff's crowning achievement in this arena. While his work with electrosurgery had won Kroeff professional recognition, his ability to take effective action was substantially enhanced when fellow Rio Grande do Sul native son Getulio Vargas took power in 1930, since Kroeff maintained excellent relationships with colleagues from his home state, who moved into powerful posts in the executive branch.¹⁰ Thus armed, Kroeff used every means at his disposal to create a cancer control service. In 1931, he managed to see that the federal budget allocated special funds for a cancerology pavilion in Rio de Janeiro, which was indeed built but ended up serving other purposes (Kroeff, 1947). In 1936, after making a number of appeals to the executive branch, he obtained more funds for building a new cancerology center at Estácio de Sá Hospital¹¹, inaugurated in 1938. It had forty beds, an outpatient clinic, operating rooms, and radiodiagnostic and radiological equipment.¹² Created as part of the Ministry of Education and Health (Ministério da Educação e Saúde, or MES), it was shifted to the health services sector of the Mayor's Office of the Federal District shortly after start-up. The fact of its establishment owed much less to any government guideline on cancer control than to a Vargas administration response to Kroeff's demands. The Cancerology Center was a specialized medical service providing patient care in the Federal District, and as such was in keeping with the Vargas government's healthcare policy of expanding urban-based curative initiatives. Despite its limited geographic scope and the budget woes that strangled its activities for many years, it was the foundation upon which a national cancer control service would be built.

A national cancer service

The process by which an organizational framework was shaped for nationwide cancer control reflected Kroeff's work in the Federal District. The public health sector in Brazil was undergoing a process of transformation under yet another period of dictatorship, this time Vargas' Estado Novo. A new reform got underway in 1937 and the Ministry of Education and Health started lending a vertical structure to initiatives against specific diseases which were believed to be hindering the development of Brazil. The first national services dedicated to such diseases came into being in 1937¹³, and Kroeff himself suggested the creation of a national cancer service.

Considering that the prophylaxis and treatment of cancer figure among Brazil's foremost sanitary concerns – as do malaria, leprosy, and yellow fever – it is absolutely essential that efforts be led by a centralizing agency of the federal government, which should set out general theoretical and practical norms to guide the campaign against cancer [and] promote popular education, train technical specialists, hold courses and university extension classes, and strive to acquire the costly physical therapy, X-ray, radium, etc. equipment, which, alongside surgery, constitute the resources needed to fight cancer (Kroeff, 1947, p.115).

In April 1941, a new reform brought the reorganization of the National Health Department and the inauguration of a number of national services devoted to controlling the specific diseases then at the top of the agenda.¹⁴ Yet despite Kroeff's endeavors, the Vargas administration resisted the idea of establishing a national cancer service, because MES officials disagreed with Kroeff's idea of reinforcing a central institution that would address various aspects of the disease at a nationwide level. This proposal went against the MES guideline of strengthening only the regulatory action of the central government and of encouraging activities and institutions set up by states and municipalities, in partnership with philanthropic groups (Capanema, Dec. 19, 1939). Despite the Ministry's resistance, a national cancer service was added to existing services under a decree published in September 1941 (Brasil, Sep. 23, 1941).

The sources I researched do not allow me to make any inference as to why MES heads changed their minds about creating a service. It may be that Kroeff's political influence meshed with the interests of Barros Barreto, director of the National Health Department (Departamento Nacional de Saúde), who, as we saw earlier, presented before the First Brazilian Cancer Congress a proposal to wage an anti-cancer campaign along the lines of what was now being suggested for the National Service. Under both projects, the State would be responsible for organizing and regulating activities while philanthropy would cover treatment and care of the incurable.

The decree establishing the National Cancer Service assigned it responsibility for overseeing and controlling an ongoing nationwide cancer campaign. Called the National Campaign Against Cancer (Campanha Nacional Contra o Câncer), its focus would be on research into etiology, epidemiology, prevention, diagnosis, and treatment; preventative action; publicity about regular check-ups and the importance of early diagnosis; treatment and care of those in recovery; and hospitalization of needy cancer patients. The decree

also made mention of the creation of a cancerology magazine, to be published by the new service, and of cooperation between the SNC and the Rio de Janeiro Faculty of Medicine to train professionals through specialization courses in cancerology (Decree-Law No. 3.643, Sep. 23, 1941). One week after foundation of the SNC, Mario Kroeff was appointed its director and the new agency began to base its activities out of the Cancerology Center that he headed at Estácio de Sá Hospital.¹⁵

In 1944, Decree No. 15.971 regulated the structure and operation of the SNC through by-laws. The Service was divided into three sections, one administrative and two dealing with the agency's mission itself: the Cancer Institute and the Organization and Control Section (Seção de Organização e Controle). At that point, the Cancer Institute boiled down to the Center created by Kroeff at Estácio de Sá Hospital; although diagnosis and treatment still took place there, these were constrained by the grossly inadequate facilities. As the unit responsible for the National Campaign Against Cancer, the Organization and Control Section ensured the uniformity of activities conducted by public and private institutions nationwide. It also advised the Ministry about federal funding of private institutions, which involved financing contracts underwritten by the Ministry (through the SNC), the state where the institution was set up, and institutions themselves. The Organization and Control Section was also responsible for enforcing prevention measures (Brasil, July 4, 1944).

Although the tasks assigned to the SNC were broad in scope, its activities were quite limited throughout the Estado Novo and were grounded on the progressive incorporation of existing institutions in Brazil's main states into the National Campaign Against Cancer. In 1942, the ranks of the Campaign were joined by the Medical Society to Fight Cancer in Rio Grande do Sul (Sociedade Médica de Combate ao Câncer do Rio Grande do Sul) (Decree-law No. 4.975; Brasil, Nov. 19, 1942); the next year, it was the São Paulo Association to Fight Cancer (Decree-law No. 5.889; Brasil, Oct. 19, 1943); and in 1944, the Bahian League Against Cancer (Decree-law No. 6.525; Brasil, May 24, 1944), as well as the Belo Horizonte Radium Institute (Decree-law No. 6.829; Brasil, Aug. 26, 1944). Once they had come into the campaign, institutions began receiving financial aid from the Ministry and technical assistance from the SNC. This process was the first step towards national action against the disease, which was to be reinforced in the 1950s by the progressive extension of federal assistance to regional institutions.

Within the realm of direct actions to fight cancer, the SNC's principle activities were clinical treatment and the first initiatives in sanitary education, the latter through its Cancer Institute. SNC reports up through 1945 indicate that an epidemiological survey had been initiated and some sanitary education efforts had gotten underway, centered on distributing educational pamphlets about the disease and on radio lectures. In professional education, the Cancer Institute had introduced a training course for physicians. In order to reach healthcare workers in different areas of the country, the course offered scholarships to students from other regions. Apart from the Cancer Institute's work – begun by Kroeff and then continued by Alberto Coutinho, who took over for him in 1944 – much remained to be done when it came to enforcing a consistent policy against the disease.

“Water dripping day by day wears the hardest stone away”

The second half of the 1940s saw the dawning of a transformation in cancer control in Brazil. Although the project that was launched through creation of the SNC advanced only slowly at first, with limited funding and activities, cancerology itself was expanding within the broader realm of Brazilian medicine, with new institutions coming into being and more specialists trained. At the same time, there was a growing belief among cancerologists that the disease should be the target of public policies, especially aimed at prevention. Taking as a reference the publicity work done in the United States and Europe, Brazilian specialists inaugurated the first prevention campaigns aimed at the broad public, which were to set the tone for prevention in the field of Brazilian cancerology in subsequent decades.

This was a highly productive period for the Cancer Institute. In 1945, its heads leased part of Gafrée e Guinle Hospital for its new headquarters, giving the institute the facilities it needed to carry out its activities.¹⁶ The new facilities not only had more beds but also made it possible for the Institute to introduce new clinical and surgical services and to expand specialization courses. Concomitantly, an intense exchange of researchers was begun, with a number of European scholars coming to the Institute and various Brazilian physicians going to institutes abroad.¹⁷ The process intensified at the beginning of the next decade. With new funds available, the Cancer Institute enlarged its staff and re-structured its activities, opening sections devoted to chest surgery and to head and neck surgery, a cytology laboratory linked to the anatomical pathology section, and the first outpatient clinic for the prevention of gynecological cancer (Marcillac, 1968).

In terms of the SNC's more general activities, the late 1940s witnessed the expansion of the network of local institutions affiliated with the National Campaign Against Cancer. In 1946, four institutions were part of its framework; by 1950, the number had risen to sixteen, with a total of 530 beds nationwide reserved solely for cancer patients. Although Kroeff (1951) estimated the number of cancer patients in Brazil at around 109,000 and the resultant need for beds at 6,000, meaning that demand far outweighed supply, figures do show a steady increase in the geographical reach of public health actions in the realm of cancer.

This process saw further growth in the early 1950s. With Getulio Vargas once again in power, the Cancer Institute was the protagonist of an unexpected episode that paved the way for the allocation of more resources to the Campaign and therefore strengthened the Institute structurally. Napoleão Laureano, physician and city council person from Paraíba, was suffering from terminal cancer and went to the Institute for treatment. Already under medical care and aware that his disease was worsening, he launched a campaign to establish a cancer hospital in his home state. His initiative caused much stir through the written and spoken press and culminated with a debate on the cancer problem in Brazil, held at the offices of the Rio de Janeiro newspaper *Diário Carioca*. Attended by the Minister of Education and Health, representing President Vargas, and by Kroeff and other doctors from the Cancer Institute, the debate was aired on the Mayrink e Veiga and Nacional radio stations and published in *Diário Carioca* (Carvalho, 2006). The broadcast triggered a strong emotional reaction among the public, inspiring large numbers of donations for

the founding of Laureano Hospital and shining a spotlight on the Cancer Institute (Teixeira, Fonseca, 2007).

Likewise in 1951 and as a consequence of this event, the Health Commission of the Brazilian Congress invited Mario Kroeff to give a conference at a session devoted wholly to cancer. Chaired by physician Janduí Carneiro, who was from Laureano's home state and a friend of his, the Commission put forward a draft law granting one million cruzeiros to the Campaign (Brasil, Apr. 28, 1954). This was a hefty sum given that the SNC's annual budget to that date had hovered at around two million cruzeiros. The new funds were used to support cancer institutions at a state level and to modernize the Cancer Institute, particularly works on its new headquarters, under construction at Praça da Cruz Vermelha.¹⁸

Other initiatives besides the Institute's own made their contributions to reinforcing the field of cancerology in Brazil. One was creation of the magazine *Revista Brasileira de Cancerologia* (RBC). The decree establishing a number of national services in 1941 called for these to publish periodicals dedicated to relevant issues in their fields of activities. Owing to financial and administrative troubles, it was only in 1947 that the SNC began to publish its periodical. With Moacyr Santos Silva as its first editor, the RBC was intended to inform the scientific community about what was happening in the field of cancerology. Other goals were to disseminate information on cancer prevention and diagnosis among non-specialized doctors as well as the lay public. The magazine likewise publicized the SNC's activities – particularly its specialization courses – and discussed issues of professional interest to the community of cancerologists.¹⁹ The RBC was initially not a scientific journal meant to publish new knowledge in the field of cancerology but rather a vehicle for bringing together professionals within the field. By presenting and discussing their demands and initiatives and affording contact between different components of the field, it provided a means both of integrating a new specialty then in expansion and of divulging Campaign activities and the demands lodged before the government by SNC cancerologists; as such, it constituted the principle arena where cancerologists could affirm themselves.

Another institution that helped unify cancerologists was the Brazilian Cancerology Society (Sociedade Brasileira de Cancerologia, or SBC). Founded on June 25, 1946, by a group of cancerologists led by Mario Kroeff, the SBC claimed it was needed to compensate for the absence of a space “where specialists, pathologists, physicians, educators, and all who were in some way interested in the grand medical and social issue represented by cancer could come together” (SBC, June 22, 1945). Its membership consisted primarily of SNC doctors, and for nearly two decades its boards comprised heads of the Service.²⁰ The SBC was a place where the main issues in cancerology could be discussed. It also provided an institutional space that brought cancerologists together and earned them respect among other medical specialties. Scholars from diverse areas of medicine were received in its chambers, where they could share knowledge and experiences regarding different aspects of cancer treatment.

In the realm of professional control over their field of activities, cancerologists managed to change the SNC by-laws in 1949 so that only staff who were trained as sanitary physicians or supernumerary physicians holding certificates from the National Health Department's Cancerology Course, given by the Cancer Institute since 1942, could serve as chiefs of the

Cancer Institute or of the Organization and Control Section (Decree No. 26.313; Brasil, Feb. 4, 1949). As we saw earlier, the SNC had promoted extension courses in the field of cancerology since 1942. The legal instrument that guaranteed its monopoly over professional activities in the public health field was of major importance in forming a cohesive group of cancerologists within the SNC, and for several decades this helped it to maintain its position as the leader of anti-cancer policies and institutions in Brazil. Specialists who had been trained in the concepts taught at Cancer Institute classes would go on during subsequent decades to disseminate the idea that public health actions should be employed in the fight against cancer and to underscore the importance of prevention policies.

The close of the 1940s also witnessed the development of educational campaigns about cancer. This type of initiative had been called for in the law that created the SNC and had gotten underway when the agency was first set up but had been limited to the preparation and distribution of posters and pamphlets in doctors' offices, schools, and other institutions and to some lectures on the topic by Institute physicians (Carvalho, 2006).

Such campaigns were very much in vogue in the United States in the 1930s and were being championed by Antonio Prudente in São Paulo. As head of the São Paulo Association to Fight Cancer, Prudente initiated a variety of educational activities on cancer, which was also a way of stimulating fund raising to establish a hospital for the Association. He launched a Campaign Against Cancer in 1946 to boost publicity about the disease. In addition to the broad distribution of pamphlets explaining the disease and forms of prevention, an exhibit was set up in downtown São Paulo at the same time.

On his visit to the United States, Kroeff learned about the campaigns being carried out there and decided to expand the SNC's activities in this field. In November 1948, he inaugurated the first educational campaign on cancer under the auspices of the SNC. The exhibit displayed photographs and drawings done especially for this purpose, featuring images of different types of cancer, their location in the body, the geographic regions where rates were highest, and so on. The exhibit was revisited a number of times in the following years. In the 1950s, when Kroeff had already left his SNC post, education activities like exhibits, radio broadcasts, and movies were gradually institutionalized. Campaigns were held every year at a state level in collaboration with SNC-member leagues, and every April the latter would take traveling exhibits to some of Brazil's major cities, using SNC material (Teixeira, Fonseca, 2007).

The SNC advanced by leaps and bounds with its process of institutionalization, continually expanding agreements with local institutions, intensifying its research and treatment work at its Cancer Institute, and launching a series of educational campaigns on cancer prevention. As the developmentalist ideals characteristic of the 1950s grew more entrenched, the government stepped up State action to control the disease, fostering a stronger SNC and Cancer Institute. Yet this process of broadening actions and the consequent strengthening of the process of institutionalization did not find any expression whatsoever in the satisfaction of social demands, as initiatives in the medical and hospital realms still fell short of needs and were confined to Brazil's biggest cities. In a country where the more easily controlled infectious and parasitic diseases still constituted the top health problems, cancer continued to be viewed as a problem of a smaller scope.

Conclusion

In this analysis, I have noted how the roads that led to this specific institutional framework, centered around the Cancer Institute, were not the same as those taken in developed countries, where the vital tools used to address the disease were philanthropic and government institutions focused on radiotherapy. Brazil's history shows a different reality: although the country's first cancer institutes appeared in the early 1920s and the action of dermatologists prompted the first government initiatives to control the disease, this was not the path to shaping effective cancer control in Brazil.

The road that would eventually lead to this end was paved one decade later by initiatives taken often by individuals or professional groups within specific contexts. Thanks to the felicitous combination of surgeon Mário Kroeff's interest in electrosurgery, his entrepreneurial drive, and a favorable context – that is, his proximity to the group swept into political power with Getulio Vargas, along with the Vargas dictatorship's desire to tighten ties with Germany – the institution that would become the radiating hub of Brazil's cancer policy came into being. Electrosurgery, a technique that had already fallen into disuse in Europe, was the instrument that yielded Kroeff the recognition he needed to see his endeavor through.

Yet if the blend of Kroeff's entrepreneurial drive and his ties to Brazil's political elite facilitated the first steps towards defining a cancer control policy, this policy remained limited for some time because the basis of its organization was weak. This limitation often times stymied any accomplishments. It was only in the late 1940s, when this endeavor began to enjoy the support of a community of specialists, that Brazilian cancerology and public policies for the sector started undergoing institutionalization.

The early second half of the twentieth century brought major development of the field of cancerology in Brazil. If we observe this period, it is easy to recognize the growing number of institutions participating in the National Campaign Against Cancer, the development of educational campaigns, the more up-to-date diagnostic and treatment technology, and the strengthening of the field through professional participation in congresses, periodicals, and societies. The Cancer Institute was the protagonist of a large part of this process. Out of the ranks of its staff and of the graduates of its courses came the professionals who led the SNC, the coordinators of public cancer policies, and the individuals who launched journals, societies, and graduate programs in the field of cancerology.

NOTES

¹ I am referring to the Bacteriological Institute of São Paulo (Instituto Bacteriológico de São Paulo), the Pasteur Institute of São Paulo (Instituto Pasteur de São Paulo), and the Federal Serum Therapy Institute (Instituto Soroterápico Federal), now the Oswaldo Cruz Foundation.

² Eduardo Rabello was head of the Skin Diseases and Syphilis Service (Serviço de Doenças da Pele e Sífilis) at the Botafogo Polyclinic, professor of dermatology and syphilology at the Rio de Janeiro Faculty of Medicine, and, in its earliest days, one of the founders and the secretary of the Brazilian Society of Dermatology and Syphilology (Sociedade Brasileira de Dermatologia e Sifilografia) and also its chairman in 1925 (Rabello, 1974).

³ The best example here is the research and therapeutic work conducted by Dr. A. Aguinaga, of the Gynecological Service at São Francisco de Assis Hospital. He was one of Brazil's pioneers in the use of radiotherapy to treat cervical cancer. He also did a number of studies on the topic and in 1925 published a book on it. All of his work was based on use of the Radiology Institute's equipment (Aguinaga, 1925).

⁴ The Inspectorship was so disinterested in cancer that the name of the disease was dropped from official communiqués in 1927, and the institute became known solely for its work in the area of leprosy and venereal diseases.

⁵ In 1930, a coup d'état brought to power Getúlio Vargas, political leader from the state of Rio Grande do Sul. A ministry encompassing health and education was created during his first year in power. At the time the Congress was held, this Ministry of Education and Health, headed by Gustavo Capanema, was just gearing up and launching a centralizing policy meant to expand activities regarding a number of diseases, cancer among them. The National Department of Public Health was the division responsible for all initiatives in the health field. On health concepts at that time, see Fonseca, 2007.

⁶ Electrocauterization, or electrosurgery, is a technique still used today in a number of surgical specialties. The procedure entails use of an electric scalpel to transmit intense heat to tissues.

⁷ In 1934, Prudente drew up the first proposals to fashion a state-level policy on cancer control in São Paulo. As mentioned earlier, he was also responsible for founding the São Paulo Association to Fight Cancer. Thanks to major fund-raising drives, he successfully founded the A.C. Camargo Hospital for cancer treatment in 1953. Antonio Prudente served as director of the Ministry of Health's National Cancer Service twice (Teixeira, Fonseca, 2007).

⁸ The physicians Antonio Prudente, Roxo Nobre, Ugo Pinheiro Guimarães, and Barros Barreto disagreed with Kroeff's proposals. In their opinion, the idea should be for people in outlying regions to have at their disposal doctors qualified to diagnose the disease and then refer the patient to a center equipped to treat him (according to the *Annals of the First Brazilian Cancer Congress*, v.2, 1937).

⁹ On discussions about the efficacy of radiotherapy and the appropriate use of electrosurgery, see the acts of the discussions from the First Brazilian Cancer Congress, held in 1937.

¹⁰ In addition to his friendships with a number of politicians from Rio Grande do Sul who were in places of power under the Vargas administration, Kroeff himself was close to the president, having rubbed elbows with him at social events and paid visits to his residence (Kroeff, 1947).

¹¹ In Kroeff's own words (1971, p.203), "It would be well to explain the conditions under which the government decided to found the service: the Treasury Minister [Oswaldo Aranha] was my friend from down in Rio Grande [do Sul]. He had come in with the Revolution of 1930. Turning to his aides, he declared: 'Pin 150 contos to the budget to calm Kroeff down'."

¹² Surgeon Alberto Coutinho, professor of the Faculty of Medicine and former colleague of Kroeff at Mercy Hospital's infirmary, was put in charge of surgery; Manoel de Abreu was responsible for the X-ray service; Sérgio de Barros Azevedo organized epidemiological research on cancer; Amadeu Fialho directed the Anatomical Pathology Laboratory; José Julio Velho da Silva was in charge of clinical services; Frida Ruhemann supervised the nursing staff; and Eduardo Vilela oversaw the radiotherapy service that was set up later (Kroeff, 1947).

¹³ After the early 1937 reform, the Ministry of Education and Public Health was renamed the Ministry of Education and Health and its activities underwent greater centralization. The first services created under the newly reformed ministry were the National Yellow Fever Service (Serviço Nacional de Febre Amarela) and the Northeastern Malaria Service (Serviço de Malária do Nordeste), both established in collaboration with the Rockefeller Foundation, then active in efforts to control these diseases in Brazil. On the shaping and enforcement of public health policy under Vargas, see Fonseca, 2007.

¹⁴ Decree-Law No. 3.171 (Brasil, Apr. 2, 1941) re-structured the National Department of Public Health, which consequently came to encompass the Sanitary Organization and Hospital Organization sectors; the Oswaldo Cruz Institute; the national services for leprosy, tuberculosis, yellow fever, malaria, plague, mental health diseases, sanitary education, medical oversight, port health, water and sewers, and biostatistics; seven Federal Health Offices (Delegacias Federais de Saúde); and the Administrative service.

¹⁵ Physicians Sérgio Lima de Barros Azevedo and Alberto Lima de Moraes Coutinho were invited to serve as chiefs of service. The Institute also had eleven assistant doctors: Luis Carlos de Oliveira Junior, Jorge Marsillac Motta, Egberto Penido Burnier, Osolano Machado, João Brancroft Vianna, Evaristo Netto Jr., Turíbio Braz, Francisco Fialho, Moacir dos Santos Silva, Antonio Pinto Vieira, and Amador Correia Campos. Many of these pioneers had long careers in the field of cancerology and would become the main actors in the process of institutionalization, both in academia and in terms of health policy.

¹⁶ The same year that the Institute moved into Gafrée e Guinle Hospital, the mayor of the Federal District, Filadélfio de Azevedo (brother of Sérgio de Azevedo, chief of the SNC's research section) ceded the federal government a lot on Praça da Cruz Vermelha, which belonged to the Mayor's Office, for the purpose of building permanent offices for the SNC (Carvalho, 2006).

¹⁷ In 1945, Argentinean cancerologist Angel Roffo conducted temporary work at the SNC; in 1948, Antoine Lacassagne came from France; in 1948, Margaret Todd from England; and in 1950, Paul Werner from Austria (Carvalho, 2006).

¹⁸ As published in the periodical *Arquivos de Higiene* (1945-1948), SNC reports offer the following budget figures: 1944: Cr\$2,476,000; 1945: Cr\$2,738,000; 1946: Cr\$2,833,000; 1947: Cr\$3,842,000. I was unable to locate any data on later periods. Under Decree No. 35.408 (Brasil, Apr. 28, 1954), 38% of the total amount allocated to the SNC should be used in construction of the Cancer Institute's new offices.

¹⁹ The RBC redesigned its editorial line in the 1960s, with progressive specialization in the field of oncology. While the 1940s and 1950s saw frequent articles on the organization of cancer services and the government's overall policies in this field, scientific articles became much more numerous starting in the 1960s. Nevertheless, the magazine continued to publish a few studies of a historical nature, with the goal of strengthening the identity of SNC technicians by glorifying their early feats (Teixeira, Fonseca, 2007).

²⁰ SBC chairs: Mario Kroeff (RJ), 1946-1950; Jorge de Marsillac (RJ), 1946-1950; Alberto Lima de Moraes Coutinho (RJ), 1946-1950; Osolando Judice Machado (RJ), 1954-1956; Francisco Fialho (RJ), 1956-1958; Turíbio Braz (RJ), 1958-1960; Alberto Lima de Moraes Coutinho (RJ), 1960-1962 (<http://www.sbcancer.org.br>).

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