

Interview with Dra. Katia Regina Marchetti

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This interview is part of an Extension Project called CAPE (Skin Cancer), which seeks to raise awareness about skin cancer, as well as its forms of prevention and treatment. The interviewee is Dr. Katia Regina Marchetti. She has a degree in Medicine from the School of Medicine of the University of São Paulo-FMUSP (2013), a residency in Internal Medicine from FMUSP (2017) and a residency in Clinical Oncology from the Cancer Institute of the State of São Paulo - ICESP by FMUSP

(2019). During her oncology residency, she completed an elective observational internship in the uro-oncology department of Johns Hopkins Hospital under the supervision of Dr. Mario Eisenberger and in the masto-oncology department of MD Anderson Cancer Center under the supervision of Dr. Vicente Valero, both lasting 1 month. In June 2018, she was selected for the "II Oncogenetics in Focus" program of the Brazilian Society of Oncology - SBOC, having completed a 1-week course at the University of Chicago. She is currently a PhD student at FMUSP, under the supervision of Prof. Dr. Gilberto de Castro Junior (Project: Efficacy and safety of flunarizine in the prevention of ototoxicity associated with concomitant chemo-radiotherapy based on cisplatin in patients with

squamous cell carcinoma of nasopharynx, oral cavity, oropharynx, hypopharynx and larynx - Phase II Study, single arm).

She works as a clinical oncologist at Hospital Sírio Libanês in Brasília, where, in addition to working in clinical research, she is responsible for the hospital support team in oncology and is the medical coordinator responsible for the oncology center on-call staff. She also works at Hospital de Base do Distrito Federal, where, in addition to teaching activities, she cares for hospitalized oncology patients and works mainly in the areas of lung cancer, uro-oncology, and head and neck cancer. She is also a professor of oncology at the Sanar course and a reviewer for the Brazilian Journal of Oncology of the Brazilian Society of Clinical Oncology - SBOC. She is a member of SBOC, GBOT, ESMO and ASCO.

The Extension group of the Biomedicine course at UNIFOR/MG would like to thank the physician and researcher Dr. Katia for kindly accepting to share her knowledge with us and with all those we will reach with our Project.

1- Tell us a little about your decision to opt for oncology and research in this area? What are the biggest challenges in your cancer treatment practice? Does anything in particular stand out to you about skin cancer, the most common cancer in Brazil?

Dra. Kátia: I believe that cancer is one of the most challenging diseases in medicine today, since it is not just one disease but a set of diseases, each with a different behavior. To give an example: we could have two patients with metastatic pancreatic adenocarcinoma. One of them responds to chemotherapy and has

controlled disease for a few years. The other doesn't respond at all to treatment and dies within a few weeks/months. A lot of research has been done trying to understand these differences in the behavior of the disease and, without the slightest doubt, this characteristic of cancer is what makes it so difficult for us to find an effective treatment. That was certainly something that attracted me to oncology. I also really like the doctor-patient relationship we have in oncology. It's a very close relationship, one of companionship, in which, as a doctor, I have a duty to take care of the patient as a

whole, both in terms of the oncology itself, but also in terms of their quality of life, their values, their feelings and fears.

Today, we still have a long way to go in cancer treatment, but we have already made a lot of progress. We have more effective medications, with improved survival and often fewer side effects. We still find it very difficult to make these treatments available to the general population, especially in the public service (SUS) due to the price of the medications. This is certainly our biggest challenge.

Non-melanoma skin cancer (basal cell carcinoma - BCC and squamous cell carcinoma - SCC) and localized melanoma (that which is only on the skin and has not spread to other organs) are mainly treated by surgery. Metastatic melanoma, on the other hand, has treatments such as immunotherapy and targeted drugs. In the case of SUS, we face the problem of queues for surgery and the unavailability of immunotherapy and target drugs in SUS due to the price.

2- In your academic career, in addition to your medical degree at the University of São Paulo (USP), we note a series of courses abroad, such as an internship at the John Hopkins Hospital, a world reference, and at the MD Anderson Cancer Center. Tell us a little about your career and what difference does this international experience make? Give some tips to our readers who are also looking for this type of training in international reference centers.

Dra. Kátia: Oncology is a very dynamic area of medicine, with many medications and treatments being developed all the time. Undoubtedly, most of these advances take place outside Brazil, mainly in the USA. With this in mind, I tried to do part of my training in large oncology research centers. I learned a lot from these experiences, especially about new medications, and their side effects, not to mention how to follow the daily lives of professionals who are world references in certain types of cancer. Unfortunately, in order to be able to do this, you must go after it with your own resources. In my case, I decided where I wanted to go and what I wanted to do. I

talked to my bosses, I made contacts, wrote letters of recommendation, and raised money. In general, we are well received in international centers, we just need to find our way around.

3- As you've said, many of our student readers are interested in pursuing a career as a researcher, and you're currently studying for a PhD directly at USP's Faculty of Medicine, without going through a Master's degree, which is more usual. Tell these readers about the advantages and disadvantages of the direct doctorate, and your reasons for choosing this course.

Dra. Kátia: During my residency in clinical medicine and oncology, I published some articles and took some research courses. When I was finishing my oncology residency, I already had my research project (a phase II study) designed. I believe that doing a PhD directly was much more a consequence of my training than a choice. For those with no research experience, a master's degree is the first step towards gaining the expertise needed for a doctorate.

4- According to an article published in the Revista Brasileira de Cancerologia, "704,000 new cases of cancer are expected for the three-year period 2023-2025. Except for non-melanoma skin cancer, there will be 483,000 new cases. Female breast cancer and prostate cancer were the most incident, with 73,000 and 71,000 new cases respectively. This was followed by colon and rectal cancer (45,000), lung cancer (32,000), stomach cancer (21,000) and cervical cancer (17,000)."[1]. However, it seems to us that, despite being the cancer with the highest incidence in Brazil, we have relatively few educational actions for its prevention and early treatment, or at least we have this perception. From all your professional and academic experience, why is this? How can we reverse it? Do you have any hypotheses to explain this number, which seems to be increasing over the next few years, as the data in the article suggests?

Dra. Kátia: The number of cancers has been rising both because of the population's increased life expectancy and because of the population's exposure to

carcinogens. The practice of taking preventive measures is very recent and the population is gradually beginning to worry about it. The most important thing to prevent all types of skin cancer is to use sun protection measures (hats, sunscreen) and to visit a dermatologist regularly.

5- You are taking part in several research projects testing drugs against various types of cancer. Tell us a little about this search for an effective therapy against the disease. Why is this search so challenging? What are the most promising drugs now? And specifically regarding skin cancer, what is the current status of research into an effective medication?

Dra. Kátia: As I said, cancer is not one disease, but several. What we're seeing more and more is precision medicine, in other words, treatment targeted at the specific molecular characteristics of each patient's cancer. I believe that immunotherapies and antibody conjugates have been the most promising drugs. Without a doubt, immunotherapies and monoclonal antibodies have been important milestones in the treatment of skin

cancer, with gains in survival and lower toxicities.

6- You work as an oncologist at one of Brazil's leading cancer diagnosis and treatment hospitals, Sírío Libanês. Even though it has the best resources for fighting the disease, what are the main causes of failure to cure or control neoplasms? In your opinion, how could these causes be reduced in order to cure or control cancer? And in relation to skin cancer, what are the main flaws you see in diagnosis and treatment that still lead to many deaths related to it?

Dra. Kátia: The main reason for not achieving a cure in cancer treatment, including skin cancer, is the delay in diagnosis and treatment. When diagnosed at an early stage, cancer can be treated and a cure achieved. When we have a disseminated, metastatic disease, we aim to control the disease, improve survival, control symptoms and quality of life.

7- You have conducted epidemiological research into cancer. Tell us a little about the main developments in this area, about your research. Tell us about the particularities you perceive

about the epidemiology of cancer in Brazil.

Dra. Kátia: Probably due to the improvement in diagnostic equipment (easier diagnosis), our way of life (pollution, smoking, industrialized products, excessive sun exposure) and the ageing of the population, we are seeing an increase in the incidence of cancer in general.

8- From your experience as a researcher and doctor who diagnoses and treats cancer, what are the most effective measures for the prevention, diagnosis, and treatment of cancer in general? And especially skin cancer?

Dra. Kátia: The most effective way is to reduce exposure to "cancer-causing agents" such as smoking cessation, moderate alcohol consumption, HPV and Hepatitis B vaccinations, a balanced diet avoiding industrialized products, the use of sunscreen and physical activity. Early diagnosis with screening tests is also essential:

- For colorectal cancer from the age of 45: annual fecal occult blood test or colonoscopy every 5 years.

- For cervical cancer in women aged 21 to 65: annual Pap smears.

- For breast cancer, women aged 50 to 74: mammography every 2 years.

- For lung cancer, people who smoke or who quit less than 15 years ago (who smoked 2 packs a day for 10 years or 1 pack a day for 20 years) from 50 to 80 years old: annual low-dose chest CT (LDCT).

There are no official recommendations for skin cancer, but I usually recommend an annual visit to the dermatologist for a full body skin examination (dermoscopy).

9- The students who were interested in this interview are from the Biomedicine course. Many of these students, like many of the readers, are interested in pursuing an academic career, and several are interested in oncology. Drawing on your expertise, give us tips on the "hot topics" in cancer research that should be on the academic agenda in the coming years. Give us tips on the skills and characteristics of a young researcher who wants to succeed in this area.

Dra. Kátia: Without a doubt, the "hot topic" is the molecular and epigenetic understanding of cancer and, from there, the development of targeted treatments (Precision Medicine). I believe that a good understanding of the basic areas (biochemistry, molecular biology, immunology) combined with technical knowledge of the bench are indispensable for this.

10- This interview is part of a university extension project that aims to raise awareness of skin cancer. Tell us your opinion of this type of project and give us some suggestions on how we can achieve our goals.

Dra. Kátia: Extension projects are at the heart of the development of extracurricular skills that add a great deal to students' education. We know that university learning comes from combining the knowledge acquired in classes and internships with the knowledge gained from extracurricular activities. The search for new knowledge, the development of organizational skills, coordination and project development all help to create a complete professional.

Regarding the project itself, I believe that people are very visual and that they absorb little, so I would focus on either short face-to-face activities or short virtual ones with a strong audiovisual appeal.