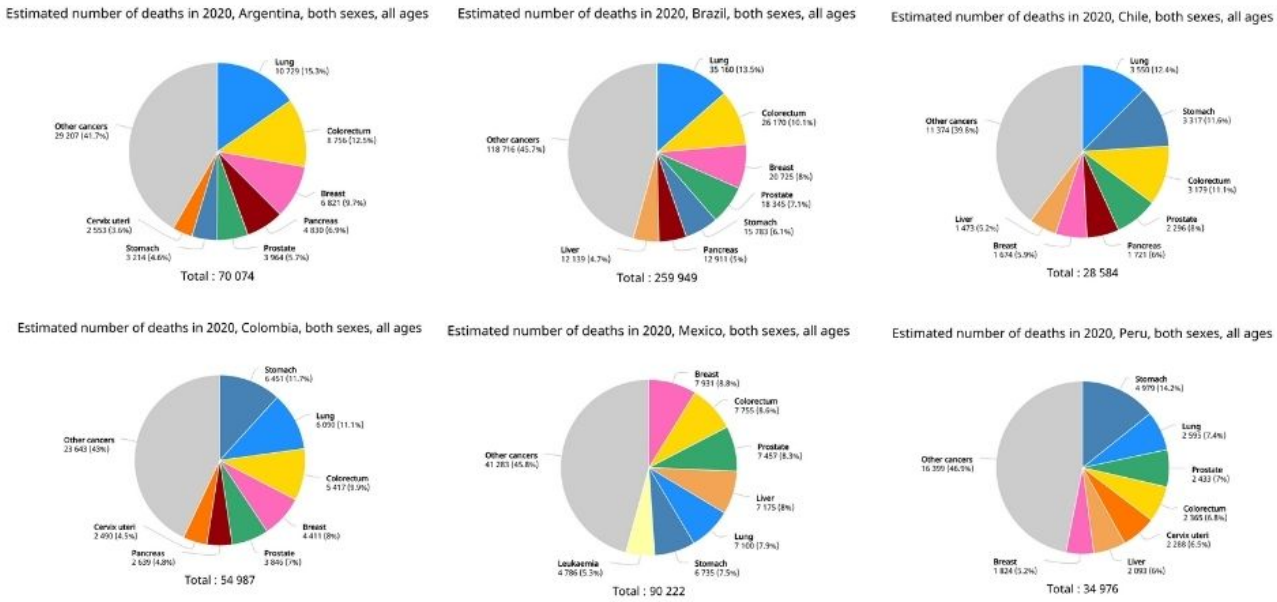
Cancerworld

What is efficiency in Latin America?

Adriana Albini / 9 April 2021



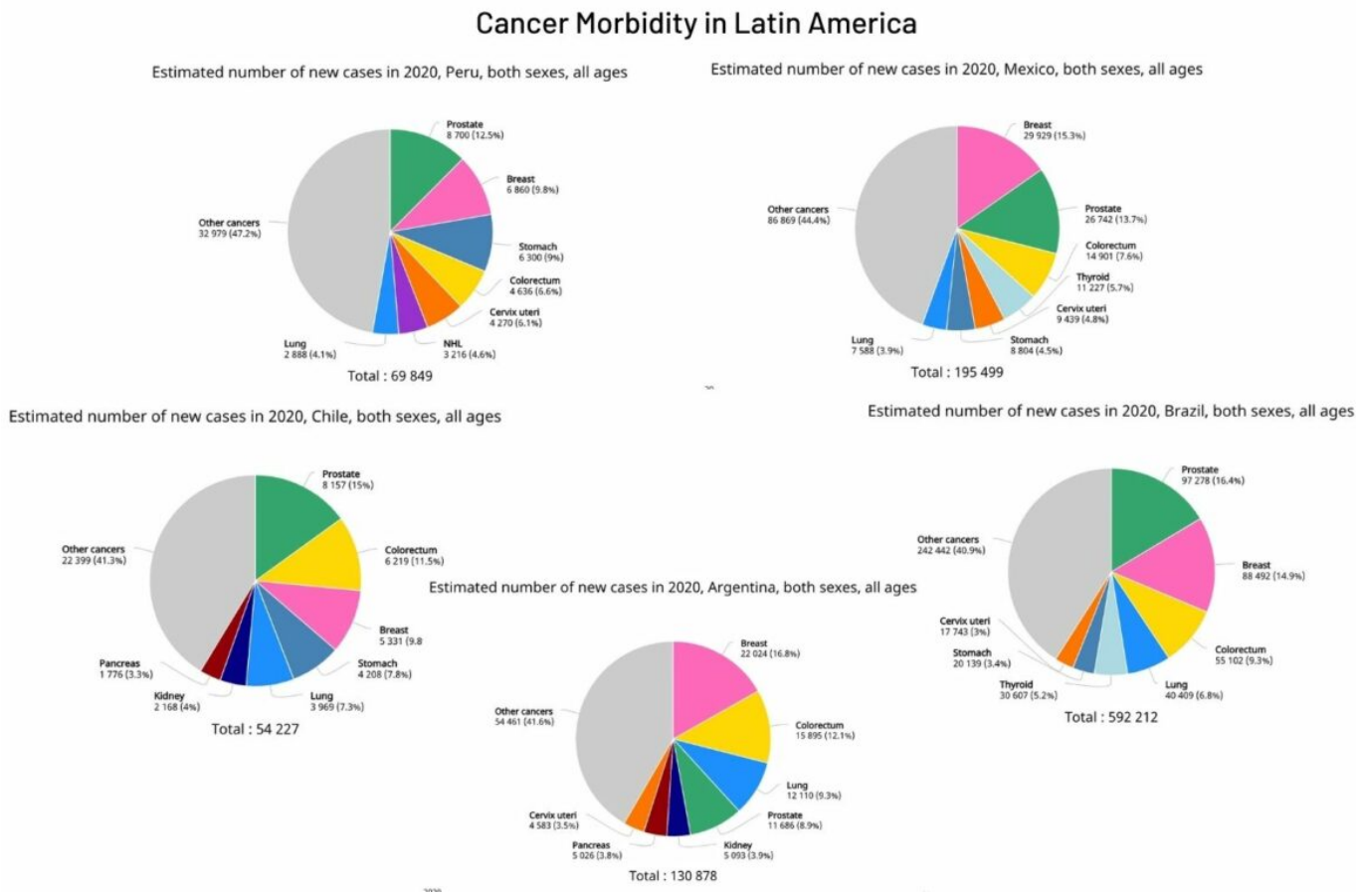
Four experts from Brasil, Peru, Argentina, and Mexico spoke in this webinar on the theme of efficiency in Latin America. They were introduced by Matti Aapro, the President of Sharing Progress in Cancer Care (SPCC), organizers of this series of webinars.

How to overcome obstacles in Brazil?

The first speaker was Dr. Gustavo Werutsky, Latin American Cooperative Oncology Group, Porto Alegre, Brazil

There has been a shift in the cause of mortality in the past couple of decades in Latin America, with cancer now in second place, irrespective of the economic status of a country. Every year, around 1.3 million new cases of cancer are expected in a population of about 600 million. To be prepared to see and treat these patients, it is vital to keep an efficient cancer registry. At the moment, cancer registries in Latin America only cover 8% of new cases, a much lower percentage than in North America and Europe. It is not just the coverage that is important, but also the quality of these cancer registries. In Brazil they contain very little information. They record the age of the patient, the stage of the disease, the type of tumor, etc., but have no information about diagnosis, molecular tests, treatment, sequencing, and outcomes. The lack of data makes it difficult for the Brazilian health policies to set priorities. The registries have only been made compulsory for institutions a few years ago. Now all new cases of cancer must be included in the registries. Unfortunately, the staff assigned by the institutions to enter the data are not sufficiently trained.

In Brazil, the whole population is automatically covered by the public health system, with 23% of people who also take out private coverage. So, 80% of the population relies only on the public health system, which offers the basic, minimal treatment for cancer and other diseases. This includes prevention and treatment, but the organization of the public system is complicated. There are three types of governance: federal, state, and municipal. The federal defines budget, services, and medicines; the state and the municipal define how the money is allocated, how many patients can be treated, and how the delivery of services and medicines are implemented. There are many delays and overlaps of functions among the three authorities.



The difference between the optimal care patients receive in the private health system and the care provided by the public health system is massive. There is a medium to high number of organizations offering private health insurance in Brazil, but the country scores low on mechanisms to limit out-of-pocket expenditures, eligibility category, benefit packages, number of premium levels and different payers. Fragmentation means that even patients with health insurance sometimes cannot receive the full treatment they should expect. For cancer patients, public health provides the minimum care needed. For optimal treatment one needs to turn to the private health system.

In terms of prevention, to give an example, HPV vaccination started in Brazil in 2014. Cervical cancer is one of the leading causes of death among women in the country and vaccination against HPV is the best way to eliminate this form of cancer. For it to be effective, two doses are necessary, administered six months apart. More than 90% of the population receives the first dose, but when time comes for the second dose, the level of adherence and coverage goes down to about 50%. Interestingly, the regions in the north and northeast, that have the highest prevalence in cervical carcinoma, are the ones receiving less the second dose. This is possibly because they are also the poorest in the country, lacking drinking water, and many essential things.

As to screening, today 30% of the population in Brazil does mammography, as recommended by the

guidelines, but only about 40% in the public health system has mammograph coverage.

Moving on to treatment, it is estimated that in Brazil about 5,000 patients die every year due to lack of access to radiotherapy. This is a serious problem because the most common cancer types in Brazil, all need radiotherapy: breast cancer, the most common type of cancer in women, but also cervical carcinoma, the third most common, lung, colorectal and prostate. Radiotherapy delivery is basically concentrated in urban areas. The population dependent on the public health system cannot go to a hospital to have a consultation with an oncologist. They need to go to a small local practice that might not have a specialist. Then they encounter delays to get a mammograph, receive the results and finally see a surgeon or an oncologist late. The AMAZONA III Study is a retrospective study of patients from 2016 to 2018. It shows that in the public health system, 40% patients were diagnosed with stage II, and 33% with stage III. In the private health system, there are 41% in stage II, but only 14% in stage III. There is a much higher later stage of breast cancer in public health patients than in those with private health insurance. This is probably due to limited access to screening and the impact of delayed diagnosis. A study by Liedke and his team from 2000 to 2010 indicates that the patients in stage III and IV of the disease in care by the public health system have a worse prognosis. The plausible reason is the delay in diagnoses, and the lack of access to optimal treatment.

When a new drug for cancer is approved by the Brazilian Regulatory Agency, it is not automatically approved for the public health system, while it is approved by the supplementary private health system. Currently CDKs inhibitors, immunotherapy andTDM1 for example are not available in the public health system, although they are all approved by the private health insurance, which covers just 20% of the population. A study carried out for LACOG, by Werutsky and colleagues, reveals that patients who have HER2-positive metastatic breast cancer have an average 23-months of overall survival rate. When compared to the data from the U.S. or Europe, it is very poor. And it is due mainly to lack of access to several HER2 inhibitors for these patients.

Drugs are not the main cost for a health system, especially when speaking about cancer. Looking at data from Europe, inpatient care amounts to at least 30 to 50% of the costs. So, to provide the better drugs is not the main expenditure. To be efficient at cancer care, a health system needs to cover everything: inpatients care, drugs, other treatments and services. Brazil spends around 1200 dollars per capita in health – compared to 10,000 in the U.S. – half of which comes from voluntary or out-of-pocket private health insurance. The government is investing very little indeed per capita in the health system. But the question is, “what is the social economic impact of cancer?” A LACOG study shows that half of the patients with stage II and III cervical carcinoma do not go back to work for a year after diagnosis and treatment. This means that, beside the health issue itself and the poor access to treatments, cancer has also a huge socioeconomic impact on patients in Brazil. This needs to be taken into consideration when preparing cancer policies. In the Index of Cancer Preparedness in Latin America, compiled by economists, Brazil is doing well in policy and planning, cancer treatment delivery, health system and governance, but not as well as developed countries.
Lastly, for cancer care, cancer research is vital. As investments in science basically rely on public funding, they are subject to changes depending on the economic situation of the country along the years, this means that several projects that were ongoing, had to stop. Yet, if you do not invest in innovation, you always depend on technologies from developed countries. Therefore it is critical to build an environment for attractiveness of private funding in cancer research in Brazil as well as to regulate academic cancer research to allow for low-cost studies, sparing costs of standard of care, and to facilitate the development of clinical trials.

Acknowledging the challenging situation, Dr Aapro stressed that this is the exactly the reason why SPCC has started these series, “so that we can build together something that could start moving towards better results worldwide”, including our privileged Europe, which has its own inequities.

How to overcome obstacles in Peru

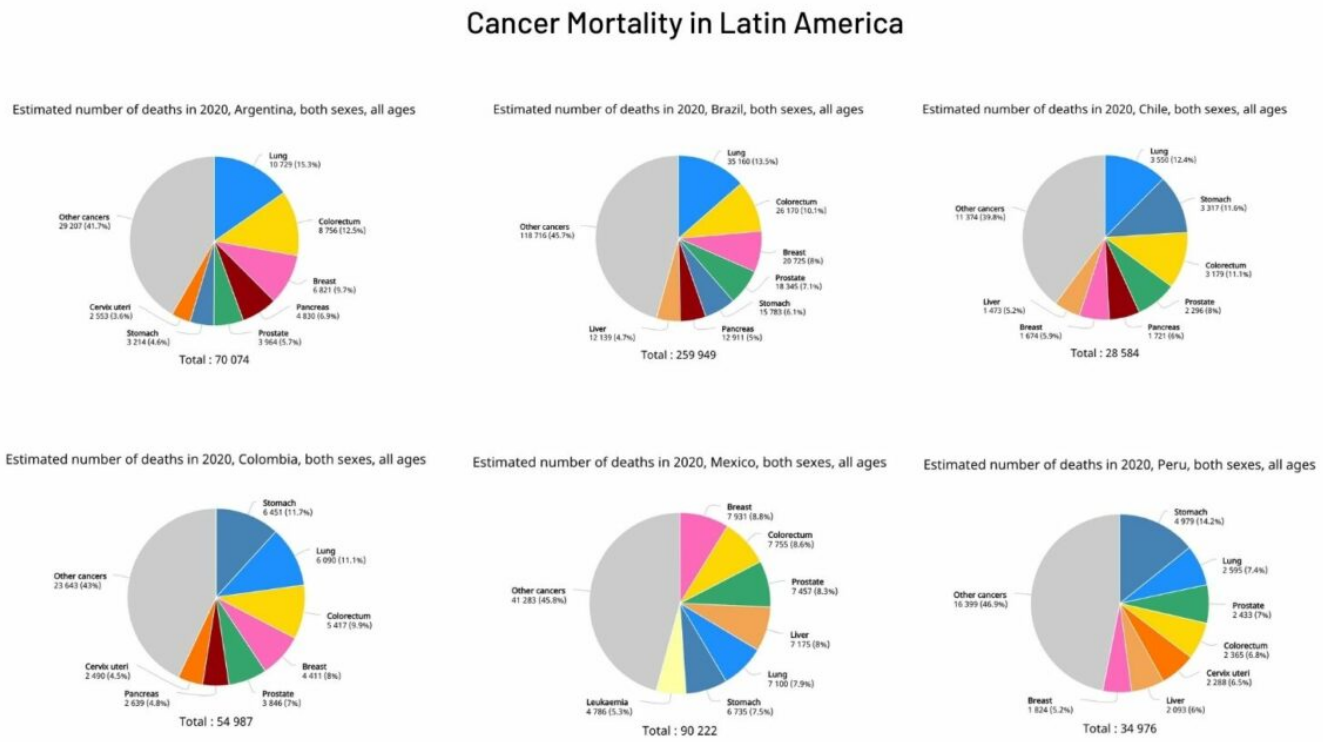
The next speaker was Dr. Henry Gomez, SPOM and National Institute of Neoplastic Malignancies, Lima, Peru

In Peru cancer is now the first cause of death. The rate has increased by 25% each year, and prostate cancer has the highest incidence in the country. The Peruvian healthcare system can be divided into two main groups, the first is public healthcare, and the second system is half private and half social security. Stages III and IV of cancer development are more frequent in the public health system, that comprises the poorest half of the population, a similar scenario to the one observed in Brazil. Many patients arrive to hospital in an advanced stage of the disease.

There are various plans for breast cancer, leukaemia, cervical cancer and so on. The government increased the budget for cancer care many times in the past ten years, and there will be further increases in the future. The focus should be on prevention, on screening and on treatment, mainly in advanced breast cancer. Data are necessary, and, to form an independent opinion, Dr Gomez's team developed an evaluation scorecard. Its aim is to assess the health services relating to breast cancer. This private initiative is much needed because in Peru there are vast differences in the population regarding breast cancer.
Gomez's team has developed a scorecard with four axes.

1. early prevention and detection.
2. drugs availability.
3. radiation therapy availability.
4. financing.

There are many aspects to take into consideration, and a qualitative evaluation is needed. It is also necessary to measure the results according to regions. For example, on the coast, 88 out of 100,000 women develop breast cancer each year. In the highlands 34. And in the rainforest 22. These regional differences are important. The team are building a 'panoramic view' by state, region, volume, assigning different colours to different scores, to allow a quick evaluation of each region. Only a few regions score a good profile all-round. For example, prevention with screening could be very poor, radiotherapy scarce, but financing good. There might be a budget, but no prevention, or no radiotherapy available. For instance, early prevention has a good profile only on the southern coast. It is a vastly heterogeneous scenario. In a score from 0 to 10, prevention and detection are at about 4.7. For example, only 4 out of 10 women know how to do self-examination, and only 2 out of 10 do it regularly. There is limited knowledge on how to prevent breast cancer, therefore it is important to have an independent evaluation of the knowledge of all the patients. In urban areas there is more knowledge, early detection, and mammography, while in rural, less developed areas, knowledge is poor. These areas lack human resources, machines, technologies.
Surgical oncologists are very few. The highest concentration is in Lima, a large city, with 10 million inhabitants. But out of 25 regions, only 10 have surgical oncologists for breast cancer, the other 15 do not have any.



Drug availability is also fundamental. For example, 6 out of 10 women are diagnosed with stage III and IV cancer, but the average wait to start a treatment is 8 months. In Peru there are only two hundred medical oncologists, the majority of whom are in Lima. Out of 25 regions, only 12 have a medical oncologist. As for the drugs available in the public health system, there is Trastuzumab, but not Pertuzumab in stage I. For chemotherapy of HER2 positive only Trastuzumab, or Lapatinib are available.

Radiotherapy. There are very few radiation therapy machines, all of which are on the coast. There are none in the highlands or in the rainforest. Patients need to travel to the coast to receive their treatment. There are 69 radiation oncologists in the country, 50 of whom in Lima. And there are no radiotherapists outside of Lima. There are only 2 radiotherapists per million people.

The financial situation is also varied, certain areas have a good economical profile, others very poor. Lima is intermediate. What is the reason for the difference? It is the same country, with the same budget. The explanation is that regional authorities are not coordinated with central government, and they can decide to spend the budget allocated to cancer for other needs. They lack a clear sense of the importance of breast cancer. The usual health spending in terms of percentage of the GDP in Peru is very low compared to both Latin America and OECD countries, while, as in the rest of Latin America, out-of-pocket costs are very high. People end up paying out of their pocket because the health system does not provide adequate care.

An independent scorecard is crucial to assess policy responses and promote better equity.

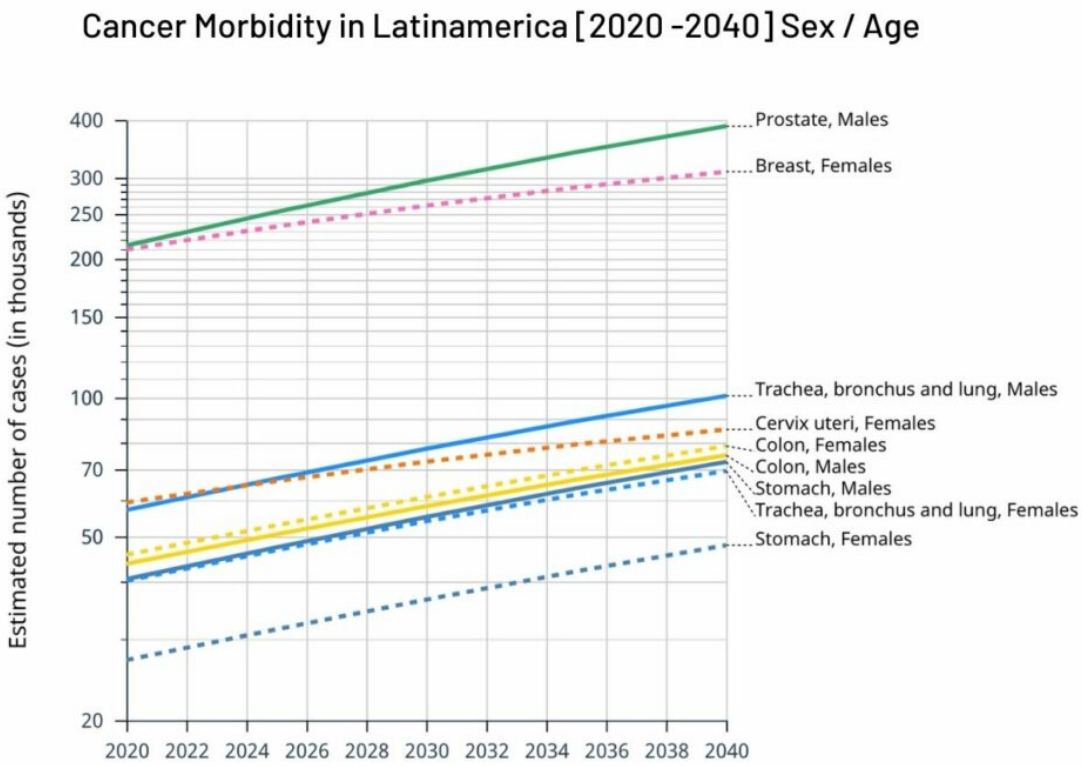
How to overcome obstacles in Argentina?

The next presentation was from Julia Ismael, All.Can Argentina, Buenos Aires, Argentina
Dr Ismael set out to analyse the situation in Argentina from two points of view: challenges and

opportunities for an efficient healthcare system. Three main challenges are identified:

a. Incidence and mortality gap.
b. Increasing burden of chronic noncommunicable diseases.
c. Health Inequalities.

Developed countries have a higher incidence but proportionally less mortality, as compared to lower income countries,. The other major challenge is the growing cancer burden. The incidence of cancer is rising in Argentina, due to increased exposure to modifying risk factors and population ageing. The National Survey of Risk Factors 2018 shows a significant increase in obesity and overweight. Poor fiber intake and a sedentary lifestyle are also on the rise. In addition, there are inequities: not all the population has access to the same type of healthcare, depending on where they live. As is the case in Brazil, this is also a consequence of fragmentation in the health system.



Cancer survival rate over five years is close to 60% in high-income countries, while it is around 30% in low-income ones. Three forms of cancer stand out, breast, cervical, and colon, in which these gaps are seen despite a proven screening strategy that could improve the results.

Moving on to opportunities, in 2010 the National Cancer Institute by Presidential Decree was created in Argentina, which was then decentralized by law in 2017, while the National Cancer Control Plan has been in operation since 2018. The line of continuous care in cancer, as described in several publications, ranges from primary prevention, secondary prevention, screening, diagnosis and treatment, to palliative care or patient rehabilitation, as appropriate. The strategy for the achievement of the objectives is based on such a line of continuous care, implemented by the National Cancer Institute as governing body, in alliance with several actors. The duration of the plan is from 2017 to 2022. So far, the results for the years 2018 and 2019 have been solidly monitored by the National Control Plan, and published on the IURA-ICCI site (link), the International Cancer

Control partnership, which has the endorsement of prestigious organization such as, IARC NCCN, ASCO. Within the National Cancer Institute work lines, in addition to prevention programs, from benign cancers to palliative care, there is an epidemiological surveillance system, training of human resources, and research. Quality monitoring covers all the NCI lines of actions. There is also a technology assessment, an essential tool for decision-making based on GRADE.

Cancer control requires the participation and commitment of several actors: government agencies, scientific and civic societies, also an ad-hoc advisory council. All these multiple actors supervise the actions of the NCCP. They interact, both in designing the public policy and in monitoring its development. Argentina is a federal country, so the provinces are invited to join the National Cancer Control Plan.

There is still a long road ahead, to strengthen the work by building consensus with several stakeholders, to build a regulatory framework, create explicit mechanisms by which innovation and high-cost technologies can be incorporated, and to strengthen institutional transparency and quality mechanisms in all processes of continuum cancer care.

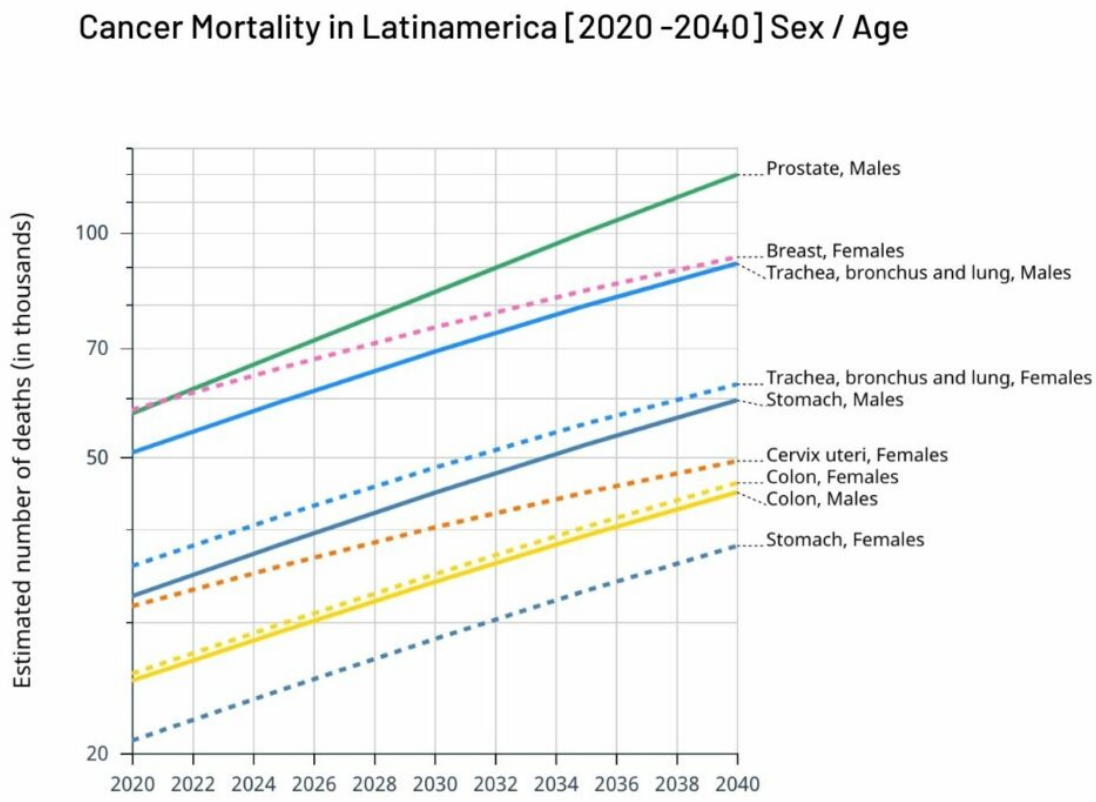
How to overcome obstacles in Mexico

The last speaker was Dr. Hector Martinez Said, SMeO and Instituto Nacional de Cancerología, Mexico City, Mexico

The case of Mexico is similar to the rest of Latin America. There is a very heterogeneous population and a very heterogeneous level of cancer care. There is a huge difference between areas like Mexico City, Monterey, Guadalajara, and the South of Mexico, Chiapas, Oaxaca, the poorest states in the country.

In a previous webinar, Dr. Pisani gave a definition of efficient cancer care, “Efficient cancer care delivers the best possible health outcomes using the human, financial, infrastructural and technological resources available, with a focus on what matters to patients and society.” Some areas are well covered in Mexico, such as human resources, others, like economy, are a serious problem in the whole of Latin America.

Efficiency in cancer care means efficiency in all the stages: prevention – in the form of vaccines and health promotion – early diagnosis and ideal treatments and schemes; and, lastly, palliative care or rehabilitation, as appropriate.



According to GLOBOCAN 2020, the rate of cancer in Mexico is 140 cases/year per 100,000 inhabitants, which is lower than other countries in Latin America. The main cancer types are prostate and breast, but colorectal, thyroid, and cervical cancer are still very common, with almost 200,000 cases per year. The projection from 2020 to 2040 of cancer cases shows a 65%a rate of increase, almost doubling in Mexico, from 200,000 to nearly 325,000. Since 1990, cancer mortality has increased dramatically in Mexico, mainly due to increase in prostate and lung cancer incidence. While morbidity is quite similar all over Latin America, mortality is more heterogeneous. The leading causes of death are breast and colorectal cancer in Mexico, gastric cancer in Columbia and Peru, and lung cancer in Argentina, Chile, and Brazil.

In Mexico, the healthcare system is divided in private and public, and the public is divided in sub-sectors: the Mexican social security covers almost 40 million people in employment, while the INSABI (Institute of Health for Welfare), ex Seguro Popular, covers those who work in informal economy, i.e., most of the population, almost 50 million, according to the last census. There are also numerous subsystems.

When seeking primary care attention in Mexico, 40 to 60% of people are visited by the private system, doctors in their own offices or in larger pharmacies. But when it comes to oncology care, only 10 to 12% of patients with healthcare coverage are treated in the private system, leaving 90% to be dealt with by the public system. In 2003, Seguro Popular was funded, to cover the uninsured population. It was a very efficient system, but limited only to some forms of cancer, like cervical, breast, colorectal, ovarian, prostate, lymphoma, testis, and all child cancer. Universal coverage, INSABI, replaced Seguro Popular in 2020, but all the goals that were set had to be moved to deal with the COVID-19 pandemic.

One of the main challenges in cancer care in Mexico is early diagnosis. According to the cancer registry promoted by Dr Alejandro Mohar, all the most common types of cancer, breast, cervical,

prostate, colorectal and lung, are mainly in advanced stages, III and IV.
Other challenges are aging of the population, smoking, increasing alcohol consumption, obesity, exposure to viral agents, ultraviolet light, and lack of physical activity.
Population is ageing, and by 2040, the majority of people in Mexico will be older than 50, with increased cancer risk..

As to tobacco, there is an efficient public policy in place in Mexico, with a decrease in consumption from 20% in 2012 to 11%, in 2018. But the most serious problem is lifestyle. The levels of physical activity in adults are very low. Mexico is second in the world for child obesity, with almost 1 in 3 children overweight or obese; and in the adult population almost 70% is obese, and that seriously increases the risk of cancer development.