Why Cancer Remains a Death Sentence in Africa

By Claudio Butticè

Often depicted as a rich world disease, cancer is becoming a concerning public health problem in sub-Saharan Africa. More than two-thirds of the people who died from cancer in the past few years lived in low- and middle-income countries. Many risk factors, such as high infection rates of HIV/AIDS, hepatitis B virus (HBV), and human papillomavirus (HPV) or increased tobacco and alcohol consumption are increasing the rates of cancer in many regions.

Cancer death disparities among rich and poor countries are quite significant, and action must be taken immediately to provide accessible and affordable healthcare to those in need. Although many of those deaths can be prevented at relatively low cost, cancer doesn't seem to be a priority for donors.

> Cancer is the second leading cause of death across the world, with 8.8 million deaths every year – nearly one death in every 6. Upto 70 per cent of these deaths occur in low- and middle-income countries, and the numbers keep growing every year. In Africa, the most common cancer types are cancers of the cervix, breast, liver, and prostate, together with Kaposi's sarcoma and non-Hodgkin's lymphoma.

Why is cancer becoming a Third World phenomenon? When did the shift in cancer cases to the Global South take place? And why are risk factors more prevalent in low- and middle-income countries as opposed to rich countries?

The current burden of cancer in Africa

Cancer is the name given to a collection of diseases characterised by the rapid multiplication of a group of malignant cells that start spreading into surrounding tissues. It is a multifactorial disease that is caused by the transformation of normal cells into tumours. The disease is caused by the interaction between an individual's genetics and the exposure to external agents, such as radiation, chemical carcinogens (tobacco, asbestos, arsenic), and certain viruses, parasites, and bacteria. Bad lifestyle habits, such as an unhealthy diet, may also increase the risk of developing this disease. The risk of cancer is much higher in adults than in children. As an individual gets older, the immune system isn't able to protect the organism against the uncontrolled growth of malignant cells, and cellular repair mechanisms become less effective. At least one death in three from cancer is caused by one of the five principal behavioural risks: high body mass index, lack of physical activity, low fruit and vegetable intake, tobacco use, and alcohol use.

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Tobacco alone is the leading risk factor for cancer and is responsible for almost one-fourth of cancer deaths. Harmful use of alcohol and tobacco use are running rampant in many African countries. The burden of tobacco-related deaths in Africa has increased by 70 per cent, from 150,000 reported deaths in 1990 to over 215,000 in 2016. And these numbers may very well be the tip of the iceberg, given how comprehensive data on cancer incidence and mortality in Africa is extremely scarce, if available at all.

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Infections due to hepatitis B and C viruses and HPV are also a key risk factor for liver and cervical cancer, and many African health systems lack the resources for mass vaccination programmes needed to stop these diseases from spreading. In low- and middle-income countries, these infections are responsible for nearly 25 per cent of cancer cases. Common epidemic diseases, such as HIV/AIDS, malaria, and tuberculosis, are also known risk factors for other cancers, such as Kaposi's Sarcoma and lung cancer.

Why is cancer a death sentence in Africa?

A diagnosis of cancer is always terrible news, but it can be a much more devastating experience in a country like South Sudan than, say, in Japan, Canada, or Germany. The highly industrialised nations already found that the best way to deal with cancer is not to treat it (although this is still possible), but to prevent it. Or, at least, to diagnose it as early as possible, when it is still possible to stop it

from spreading through the body with lethal consequences. In sub-Saharan Africa, where early detection and prevention are not widely available, the risk of getting cancer and the risk of dying from it is nearly the same.

Since specialised facilities to treat cancer are often not available, and the data to drive cancer policies is sorely lacking, when patients are diagnosed with cancer in Africa it is usually already too late. Many patients only receive a diagnosis when they're very close to dying. Treatment services are available in less than one-third of the cases in low-income countries, compared to 90 per cent in high-income ones. In more than 20 per cent of African countries, access to cancer treatment is not available at all. And even when treatment is available, lack of medical literacy regarding cancer may mean that the treatment received is not the right one. The number of specialised oncologists in Africa is abysmally low, and many doctors are simply not knowledgeable about cancer to provide appropriate care. For example, a past study of breast cancer patients in Nigeria showed how several women kept being treated with antibiotics or other ineffective medications for months or years before receiving a proper diagnosis.

National cancer registries are rarely found, and even when they exist, they must rely on obsolescent technologies, sparse and unreliable data, and underdeveloped facilities. This news is particularly depressing since early detection may easily prevent between 30 per cent and 50 per cent of cancers. Just to name an example, HPV alone is known to be the cause for 70 per cent of all cervical cancers, the most common malignancy in the African region. In North America, a series of massive vaccination campaigns against HPV have reduced this risk at least five-fold. And even when vaccines are not available, routine cervical cancer screening and early treatment can detect this disease while it can still be treated, effectively preventing up to 80 per cent of cervical cancers.

An epidemic coming from the Western world?

It has often been said that cancer is a disease of the industrialised world, and has thus been associated with the Western world more than with the poorest African regions. Following the traditional Western paternalistic narrative, in Africa people die of starvation much before they can reach the age where cancer usually starts manifesting. In a curious and horrible turn of events though, this assumption may hold more truth than we may think. The Western industrialised nations brought cancer to Africa, starting with the wanton exploitation of its land to strip it of its natural resources regardless of the catastrophic environmental consequences.

Environmental factors are important contributors to the burden of cancer, especially in some regions. For example, petroleum spills and over-extensive environmental exploitation of the Niger Delta region caused vast contamination of ground, soil, air, and water. The local population has been exposed for decades to high levels of many dangerous carcinogens, ranging from dioxins to benzene and polycyclic aromatic hydrocarbons (PAHs). Benzene alone was found at levels that are 900 times above World Health Organization (WHO) recommendations. To protect themselves from the acid rains that ravage this region, people must seek shelter under asbestos roofing, which is another known carcinogen that may cause lung cancer. And when the crops and the livestock are contaminated by oil spills, increased risk of cancer of the digestive tract is nothing but an obvious consequence.

Mozambique and cancer: A history of strife

Cancer is a disease, and like any other disease, it becomes much more problematic in all regions affected by poverty and lack of infrastructure. Decades of civil war and struggle left many African countries with no healthcare system or wrecked and devastated the (few) existing facilities. Droughts, insufficient sanitation, and poverty exacerbate the damage already precipitated by civil

and military strife, with many health professionals preferring to leave their countries to go to Europe and the U.S. in search of better wages.

For example, during the 1970s, the primary healthcare system in Mozambique was well developed, and the local facilities treated a large number of patients every day. The government had invested substantial resources in vast vaccination programmes that were able to provide coverage to more than 90 per cent of the population, reducing the risk of many types of cancer. Until the civil war exploded. When the anti-communist group RENAMO supported by the CIA and conservative U.S. forces started attacking FRELIMO, they decided that the best way to hit their foes was to destroy the country's infrastructure. Schools, roads, hospitals, and health clinics were destroyed, and as Mozambique descended into civil war, the government had to make severe budget cuts to the public health expenditure. Corruption started running rampant, and in a country plagued by poverty, paying the bribes required by many doctors and nurses was often impossible.

> Many African countries are now taking steps to address the rising cases of cancer in their countries. In 2016, Kenya's National Hospital Insurance Fund (NHIF) made a commendable choice. Radiation therapy, surgery and four courses of chemotherapy per year are now included among the services provided for free for the 18 per cent of Kenyans covered by the fund.

Today, no radiation therapy centres are available in Mozambique, leaving all patients who suffer from the most common cancer types in this country (cervix, breast, and prostate) without adequate treatment. Without proper infrastructure, natural disaster emergencies, such as cyclones and flooding, also cause the spread of malaria, which rapidly becomes endemic in many areas. The overall health conditions of the population is atrocious, with HIV/AIDS and malaria prevalent among both adults and children. In Mozambique, the rise of cancer is nothing but a consequence of war as HIV constitutes a risk for Kaposi's Sarcoma, while malaria is a risk factor for Burkitt's lymphoma among children.

It is time to draw a line

Many African countries are now taking steps to address the rising cases of cancer in their countries. In 2016, Kenya's National Hospital Insurance Fund (NHIF) made a commendable choice. Radiation therapy, surgery and four courses of chemotherapy per year are now included among the services provided for free for the 18 per cent of Kenyans covered by the fund. Before this plan was launched, the prices for cancer treatment in the country used to be way out of reach for a majority of Kenyans.

However, much more needs to be done, from strengthening the drug supply chain systems in public facilities to prevent stock-outs to dealing with the chronic absence of specialists in a country where there are only 22 oncologists for a population of 46 million. Today, it is very hard for all Kenyans to access those services, and additional costs make long-term cancer treatment hardly affordable for most families. But the Kenyan experience is a prime example of how much can be done even in countries with limited resources.

In November 2017, the National Comprehensive Cancer Network (NCCN) and the African Cancer Coalition (ACC) released new cancer care guidelines that take potential economic constraints into account, as well as focusing on the most commonly diagnosed cancers in each region in sub-Saharan Africa. Countries such a Nigeria established a partnership with the University of Birmingham to teach pathologists how to detect and diagnose cancer over Skype. Evidence-based cancer care can provide more affordable and ethical solutions to treat cancer without compromising health

outcomes, such as providing fewer but larger doses of radiation to reduce the costs.

Today, modern medicine teaches us that cancer is a deadly disease that is often resistant to most treatments and that the most effective approach is one that combines education and prevention. Prevention should be at the core of any system that wants to have a chance to win the war against cancer, especially when resources are limited. A focus on primary care and prevention over curative care saves more lives, is less expensive, and is less stressful for people who simply avoid cancer rather than facing it.

Cancer screening programmes, new cancer treatment guidelines, and vaccination campaigns saved countless lives, but it's still hard to win this fight when so many African countries do not understand that they must allocate their resources to train more specialised healthcare workers and establish more advanced facilities. Any modern nation has the duty to invest its budget on its human capital, the most valuable resource, and rely on local resources instead of seeking help from abroad.

Countries such as Kenya, Rwanda, and Nigeria are trying to make cancer services accessible to their populations, and by doing so, they teach us a fundamental lesson – that fighting cancer isn't just a battle that is fought inside hospitals; it is a war that is fought at the political table, first and foremost. Only with adequate investments and proper healthcare infrastructure can African countries stand a chance against this deadly disease.

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