The Prevention of Cancer

Topic Background
According to the World Health Organization, “cancer is a generic term for a large group of diseases characterized by the growth of abnormal cells beyond their usual boundaries”\(^1\). It can affect any part of your body, and is one of the deadliest diseases in the world. In fact, in 2018 cancer was responsible for around 9.6 million deaths around the globe\(^2\). Around the world, this disease is one of the most complicated to research due to its highly individualized nature. Cancer occurs often from genetic mutations within a group of cells, and these mutations could happen due to thousands of reasons. Lifestyle does greatly affect an individual’s chance of getting cancer, but genetic susceptibility also plays a role. Sexually transmitted diseases such as hepatitis B also lead to complications like liver cancer. Even those who are perfectly healthy cannot guarantee cancer prevention, as one mistake in the copying of DNA could result in such a deadly mutation. Thus, researchers still puzzle and agonize over how to find a cure, once and for all. While cancer indiscriminately affects all people, its ugly head rears disproportionately in low- and middle-income countries, with over 70% of cancer-related deaths occurring in these areas\(^3\).

Challenges
The World Health Organization has worked hard over the years to produce content, research, and statistics on cancer. There are existing challenges, however, to overcome before actionable solutions can reach every corner of the Earth. The biggest obstacle thus far is the cost of both research and treatment. The United States is one of the leading countries in cancer research, with some of the most advanced hospitals and treatments in the world. No amount of research can help the poorest and most needy of patients, however. Even with good health insurance or coverage, an average length of treatment would cost around $150,000\(^5\); if you have a rare or aggressive form of cancer, then these costs would likely skyrocket. Even in countries like Germany, where healthcare is nationalized, patients may pay hundreds of thousands of Euros for

---

\(^1\) [https://www.who.int/cancer/en/](https://www.who.int/cancer/en/)
\(^2\) [https://www.who.int/news-room/fact-sheets/detail/cancer](https://www.who.int/news-room/fact-sheets/detail/cancer)
\(^3\) Ibid.
\(^4\) [https://tef.org/content/report/un-made-list-hospitals-syria-now-theyre-bombed/](https://tef.org/content/report/un-made-list-hospitals-syria-now-theyre-bombed/)
a mere chance at survival⁶. Patients in more developed nations have the option of participating in clinical trials in order to afford treatment. The challenge with these clinical trials is that they are not guaranteed to work, and there are always risks involved with participation. All these options are still better than no options, though, which is unfortunately what most patients in low- or middle-income countries receive.

**Hospital Access and Healthcare**

In most parts of the world, hospitals are difficult to access. In many low- to middle-income countries, any available hospitals are often understaffed and severely understocked with resources. Venezuela demonstrates one of the most severe examples of healthcare deterioration. Not only is there a severe medicine shortage, but more than 13,000 doctors have also fled the country in the past five years to escape poor treatment, poverty, and lack of resources. This is in large part due to President Maduro’s refusal of aid, and that largely shows the role governments play in whether or not patients receive equitable healthcare access⁷.

**Past Actions**

Many international agencies and United Nations organizations have worked to do research on or try to treat cancer. In 2015, the General Assembly created seventeen Sustainable Development Goals (SDGs) to be successfully implemented in every country of the world by 2030. The third SDG, good health and wellbeing, aims to “ensure healthy lives and promote well-being for all at all ages."⁸ Specifically, the fourth target of SDG 3 is to “reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being."⁹ Cancer remains one of the deadliest noncommunicable diseases worldwide, and thus is directly addressed by the General Assembly and the Sustainable Development Goals. As a result, the UN dedicates vast amount of funding, focus, and research each year to ensuring individual countries put policies and projects in place to eradicate cancer within their borders.

Specifically, the World Health Organization has made cancer one of its highest priorities. To dedicate more brainpower to the disease, it created the International Agency for Research on Cancer (IARC) in 1965. The IARC works with many partners, both public and private, worldwide to do research and provide evidence for cancer prevention and cures¹⁰. Through the tireless research of this organization, the WHO Model List of Essential Medicines has a whole section dedicated to various treatments and medicines directly related to cancer. The most updated 2019 list includes over 100 targeted therapies, pain medications, immunomodulators,

---

¹⁰ [https://www.who.int/about/iarc/en/](https://www.who.int/about/iarc/en/)
and more that all countries and patients should have access to\textsuperscript{11}. The WHO also works with national governments to implement national cancer control programmes, which tackle the public health policies needed to address cancer on a community-based level\textsuperscript{12}. Outside of UN organizations, the Union for International Cancer Control (UICC) is another large group dedicated to the global eradication of cancer. The UICC has a large membership base of ministries, researchers, and pharmaceutical companies, all dedicated to curing cancer. It supports goals to increase Hepatitis B and HPV vaccination programs, incentivize health specialists to stay in low- and middle-income countries, increasing access to vital pain medication, and more\textsuperscript{13}.

In 2017, members at the World Health Assembly adopted the 2017 Cancer Resolution. This was a landmark document that outlined specific, actionable steps for each country’s national health department to take so that they could treat and solve the issue of cancer. This summit brought to the international stage the debate over healthcare as a human right as opposed to as a privilege\textsuperscript{15}.

Possible Solutions

In the medical field, there is a difference between disease and illness, though in the vernacular we use the terms interchangeably. Disease refers to any condition that impairs the normal functioning of the body\textsuperscript{16}, while illness refers to how a person may perceive their health status to be. There are four stages of prevention of any disease, cancer included: primary prevention, secondary prevention, tertiary prevention, and quaternary prevention. Possible solutions to cancer worldwide should focus on primary and secondary prevention, as tertiary prevention is more costly and lowers the patient’s quality of life. Primary prevention is a preventive measure: neither disease nor illness are present. This includes keeping a healthy diet, exercising regularly,
putting on sunscreen, or getting vaccinated. The second stage of prevention helps catch diseases when they first start to appear; here, disease is present, but illness is not. Examples of secondary prevention include timely, regular breast cancer or prostate cancer screenings. The earlier that doctors and scientists catch warning signs or tumors, the better chance they have at eradicating the cancer within the body. During tertiary prevention, both disease and illness are present. It becomes harder for doctors to get rid of the cancer here, as it is likely in a late enough stage where the patient can feel its effects. Chemotherapy, radiation therapy, and immunotherapy are types of tertiary prevention. Doctors try harder to extend comfort and quality of life instead of just curing the disease.

Any attempt at implementing comprehensive public health solutions must consider a combination of primary and secondary prevention options. The World Health Organization must dedicate researchers, experts, and policy professionals to every country in the world who asks for help. The last group is especially important because community health and health interventions cannot properly be applied without the cooperation of policymakers. One of the most common causes of cancer, tobacco, causes an estimated 30-50% of annual cancer-related deaths. Both first-hand and second-hand smoke have widespread negative impacts, including lung cancer, which is the most common form of cancer worldwide. In addition, the rise of e-cigarettes and vaping in Western countries has led to increased research on what adverse effects on the body this new technology could have. Providing expanded access to contraception and sexual education would critically lower the spread of diseases like HPV and Hepatitis B, which are two deadly precursors to lung cancer, ovarian cancer, and more. Promoting healthy lifestyles through the building of clean environments and community exercise spaces would further target primary prevention. All these ideas and public health interventions, however, need national dedication of funding, employment, and policy.

Though cancer is a worldwide epidemic and a noncommunicable disease that indiscriminately kills, the strategies that work best are individualized solutions that come about with national cancer control programmes. National sovereignty and access to government funding must be high on the list of priorities for the World Health Organization. Everyone more or less agrees that they want to cure cancer, yet this is easier said than done. Many countries simply do not have the money to dedicate to hospitals, healthcare, or research. Perhaps creating funding pools for countries and patients in need is the best immediate solution to a larger roadmap for success.

---

18 [https://www.who.int/news-room/fact-sheets/detail/cancer](https://www.who.int/news-room/fact-sheets/detail/cancer)
Further Research
Cancer is an incredibly complex disease. To read more on this topic, start with the links provided below:

- https://www.uicc.org/who-we-are/about-us
- https://www.who.int/cancer/publications/cancer_control_advocacy/en/?scrlybrkr
- https://www.who.int/news-room/fact-sheets/detail/cancer
- https://publications.iarc.fr/publications/media/download/4102/32d470835c4d8373b813c36cf56cd4c12c433e5b.pdf

Worksheet Questions
1. How can the World Health Organization help to lower costs of key cancer treatments and medicines to all patients who cannot afford it?
2. What preventive measures can be implemented worldwide to lower the incidence of cancer?
3. What steps can the World Health Organization take to encourage universal healthcare with individual governments?
4. What obstacles remain in curing and treating cancer?
5. Can a comprehensive solution to healthcare be achieved by an international group like the United Nations?