A GLOBAL INITIATIVE
Can you begin by introducing the World Health Organization (WHO)'s Cancer Control Programme (CCP)?

Cancer control is a complex endeavour that comprises prevention, early detection, treatment and palliative care under one overarching framework, as well as a common goal to reduce cancer mortality – together with other noncommunicable diseases (NCDs) – by 25 percent by 2025 as agreed at the 2013 World Health Assembly. At WHO Headquarters in Geneva, Switzerland, we have various departments dealing with policies to address this goal, and I coordinate these efforts across the organisation as the matrix, including our work with the International Agency for Research on Cancer (IARC) based in Lyon, France, in order to provide a consistent ‘one WHO’ response to the cancer burden. The CCP is routed in the NCD political and strategic agenda of WHO, which started with the UN General Assembly Political Declaration in 2011, and highlights – for the first time – the threat of NCD on worldwide health and development. Alongside other NCDs including cardiovascular diseases, diabetes and chronic obstructive lung diseases, cancer is part of the WHO NCD Action Plan, which technically translates the UN political declaration into country action as cancer shares many of its behavioural risk factors with other NCDs, including tobacco and alcohol use, physical inactivity, an unhealthy diet and obesity.

What does your position within the CCP entail? How has your background prepared you for the role?

I am specialised in internal medicine, and worked for a decade as a clinician (general practitioner) in primary care, as well as Senior House Officer in provincial and university hospitals in Munich, Berlin and Bielefeld. When the Berlin Wall came down in 1989 I went to Dresden, and the vanishing East Germany still had a different healthcare system to West Germany, with a strong primary healthcare approach. I learned a lot, especially about NCDs and how to manage them with limited resources. With my clinical specialisation finalised, I returned to education to study public health and graduated with a Master’s degree, after which I switched to teaching and research and became Assistant Professor in epidemiology at the School of Public Health Bielefeld. With this broad professional background, I joined WHO CCP in 2001.

Now, I fulfil both the role of Focal Point for Cancer Control at WHO Headquarters in Geneva and Liaison Officer with IARC. As a cancer control policy officer, I develop guidelines and standards and make sure that WHO Member States are assisted adequately in developing their national cancer programmes. A lot of my work relates to engagement with partners, the leading global professional and non-governmental cancer organisations, in order to synergise our efforts.

I collaborate with IARC to catalyse the translation of cancer research results into global cancer control policies. For instance, IARC has a flagship programme called the Monograph Series, which is the global authoritative reference about the causes of cancer – and is continuously updated. The Monograph about tobacco as a cause of cancer was extremely important as a scientific basis for the development of the WHO Framework Convention on Tobacco Control (FCTC). This was particularly true for the IARC Tobacco Monograph’s evidence on passive smoking which supported the FCTC’s regulations on banning smoking in public places. Evidence generated by IARC is therefore an essential component of our WHO cancer control policies.

How does the Programme address some of the most prevalent environmental causes of cancer?

I work closely with our environment and health department, which sets standards in reducing exposure to causes of cancer such as asbestos, airborne pollution including diesel smoke, and ionising and non-ionising radiation. I rely on them greatly to help countries develop national policies that reduce population exposure to carcinogens by means of regulations and legislations. Alleviating the burden and incidence of cancer is complex; the effects are not immediate, but they are beneficial and cost effective in the long run. Awareness is also vital and often the subject of debates; only recently there was an irritating article published in Nature by a team who...
endeavoured to prove that cancer is just a random phenomenon. We know it’s not – there is solid evidence about cancer’s well-defined causes and the role they play in carcinogenesis, which gives us the means to prevent cancer.

The CCP also works to improve early detection and screening procedures. In what manner could the implementation of best practices in these areas help improve patient outcomes?

Early detection revolves around the general principle that cancer diagnosed in the early stages is easier to treat and the chance for a cure is higher than in later stages. It is therefore crucial to think about how to detect cancer earlier; there are two ways to get people into the system more effectively. One is generic awareness by the population of the possible signs and symptoms of some cancer types (health education), like we started in the 1950s-60s in Europe: think about it, look at your skin, is something bleeding? Do you have a lump in your breast? If so, go to the doctor. It’s not very systematic but it’s a matter of awareness, and it works.

The other is the systematic application of a test for at-risk populations known as screening. With regard to breast cancer, we know from a recent IARC review that quality controlled mammography screening programmes are effective in reducing breast cancer mortality. However, they are costly and often only feasible in affluent countries. With regard to cervical cancer, WHO has issued – and I was deeply involved in this work – extensive guidelines and recommendations which are universally applicable. They build upon the progress made in research and development on new screening technologies such as human papillomavirus (HPV) testing, which will replace Pap smear technology in the future.

TOBACCO: THE BIGGEST RISK FACTOR

With a focus on smoking, Dr Andreas Ullrich highlights the importance of prevention schemes for raising awareness of lifestyle and behavioural choices.

Worldwide, about 20 per cent of cancer mortality is due to tobacco use, so I cooperate closely with the secretariat of the WHO Framework Convention in Tobacco Control (FCTC) and the Tobacco Free Initiative, which is an international legally binding treaty on tobacco control. It’s our strongest public health instrument to impose tobacco legislation in countries. Good tobacco control policies require governmental commitment as part of implementing the FCTC in four major areas by:

- Raising tobacco taxes to reduce demand and consumption
- Creating legislation to impose sustainable smoke-free environments (leading to smoking cessation and protecting non-smokers)
- Alerting individuals to the dangers of tobacco use through pictograms on packages
- Banning all forms of tobacco advertising, promotion and sponsorship

Tobacco control and cancer control are synergistic. As cancer is still such a frightening disease, I promote the use of the ‘cancer flag’ as an important argument against tobacco. Finally, it’s important for clinicians and doctors to educate their patients about the benefits of smoking cessation, even later in life, as some of the damage is reversible.
Moreover, the European Union, under the technical guidance of IARC, has issued guidelines on how to plan cervical, breast and colorectal cancer screening programmes. Recommendations are given about which population age group to target and how to develop quality control programmes so that best practices are implemented. Importantly, there is no screening without treatment, or without a system in place that follows up after a positive test – otherwise there is no value in early detection. The collaboration of various disciplines is often necessary. With breast cancer, for example, if signs of cancer are detected in a mammogram, a biopsy needs to be taken and analysed by a pathologist and, if cancer is confirmed, the patient must be referred for further treatment, which may include surgery, radiotherapy and chemotherapy. It is important that decisions are taken across medical disciplines and actively involve the patient, who must have a voice in the decision making process.

**Why is improving palliative care and quality of life for cancer patients a key focus for the Programme?**

I have talked about prevention, early detection and treatment. The fourth column of the Programme is palliative care – a very broad concept which has the overall objective to improve the quality of life of cancer patients. This is affected by both the diagnosis of the disease and the side effects of treatment. We need skillful approaches for helping patients cope, with anything from hair loss to pain and fever. The view of doctors on palliative care has been a little ambiguous in the past because palliation means losing the battle against cancer and might be less rewarding. However, we now have a strong political position on the value of palliative care as expressed in the World Health Assembly Resolution issued last year. For the first time in history, we have a resolution that is aimed at improving quality of life – not only for cancer patients, but also for those affected by serious chronic conditions, such as neurological diseases and dementia. The Resolution is a firm commitment by all countries of the world to develop a national palliative care programme as part of their broader cancer control and health system.

**What do you consider to be the greatest obstacle to improving cancer control?**

Cancer control needs effective prevention and a healthcare system in place that provides access to early detection, treatment and palliative care. Both are complex endeavours facing major challenges. Cancer prevention is a multisectorial process that is mostly situated outside the healthcare system, also involving governmental and parliamentary decision making. With regard to behavioural factors such as diet and physical activity, the debate on how best to find a balance between market forces and health policies is even broader in societies.

In many middle- and low-income countries, healthcare systems are mostly focused on infectious diseases, and maternal and child health. In order to build up their cancer management systems, national planners will need to invest in a set of building blocks that include national treatment standards, training for healthcare providers and a national list of prioritised medicines and technologies necessary for cancer treatment. Cancer management requires reorientation at all levels of care since it extends over long periods of time. Often, there are not enough specialised surgeons, radiotherapists and oncologists. Another frequent hurdle is access to cancer medicine; in order to improve the situation we need to know how countries are faring in their provision of chemotherapeutics and the obstacles they face.

I have hope that with advocacy happening everywhere for cancer, and governments teaming up, a great deal can be accomplished. For example, there’s a interesting movement called African First Ladies Against Cancer, whose previous annual meeting was in Namibia last year. It was impressive to see how the first ladies from over 20 sub-Saharan African countries are united in their advocacy, with a focus on cervical and breast cancer. In addition, the Union for International Cancer Control organises a global advocacy event annually known as the World Cancer Leader’s Summit with strong participation by WHO, which I am coordinating. In 2013, South Africa’s contribution, supported by the presence of the First Lady of South Africa and the Minister of Health, impacted heavily on decision making for cancer. South Africa is now very much ahead with their National Cancer Plan, and they are working closely with the Ministry of Health and our WHO office in Pretoria to support them in their efforts.
TARGETED INTERVENTION

National cancer control programmes are highly dependent on the resources available. Dr Andreas Ulrich outlines why tailored, country-specific strategies are so valuable.

Every country has a different risk profile – some of which are more predominantly exposed to infections, such as those in sub-Saharan Africa. While there are nations more heavily affected by behavioural risk factors, others are more plagued by environmental elements. Therefore, national plans must be based on country-specific priorities determined from data analysis, and centred on aspects such as the prevalence of smoking or obesity. Prevention strategies, early detection techniques and treatment are therefore developed based on the pattern of cancer and how the healthcare system and population in the country respond. Experiences in Europe, for instance, will differ largely from those in Asia or Latin America.

Good planning requires excellent, trustworthy data. The WHO Global Cancer Country Profiles (www.who.int/cancer/country-profiles) we developed last year at the World Cancer Congress in Melbourne, Australia, are an import source of information about the cancer burden, as well as the pattern and prevalence of cancer risks so that countries can set national cancer planning priorities. These data are collected by WHO on a regular basis as part of a broader monitoring system for cancer and other noncommunicable diseases such as cardiovascular diseases, diabetes and chronic obstructive lung disease. For effective planning, it is crucial to have information about cancer incidence (number of new cases per population and year) and mortality (number of cancer deaths per population and year). Cancer incidence mirrors the national situation of the population’s exposure to cancer risks one to two decades prior to the years of reference, since cancer develops over long time periods. For instance, lung cancer incidence is a good trace for tobacco exposure, while liver cancer reflects the problem of hepatitis infection in a country. Cancer mortality is a more composite measure of incidence and the quality of cancer management services to deal with incident cancers.

THE IMPACT OF INFECTION

Dr Andreas Ulrich explains how some viral infections are responsible for causing cancer and discusses the cancer prevention strategies developed from this knowledge.

Some cancers of major public health relevance are caused by viral infections that are preventable through immunisation. Liver cancer, which represents a substantial problem in sub-Saharan Africa and many parts of Asia, is often the result of a chronic hepatitis B or C virus infection. We have a very effective vaccine against hepatitis B that is part of the WHO global vaccination programme. I see a great opportunity for synergies between cancer prevention and immunisation programmes in terms of advocacy and programme planning.

Cervical cancer is also a serious issue in many low- and middle-income countries. In some sub-Saharan African nations it’s the number one killer from cancer among the female population. It is the viral infection group containing human papillomavirus (HPV) that causes cervical cancer, notably subtypes 16 and 18, against which we now have effective vaccines. HPV is sexually transmitted and, in terms of prevention, it is a long process from the availability of a vaccine to its large-scale implementation. We at WHO have created crossover coordination between cancer vaccination for adolescents and reproductive health, and have developed the necessary tools so that countries can now set up their HPV programmes. As HPV is only effectively preventive when given prior to sexual debut, HPV programmes need to target adolescent girls. This requires culturally sensitive information about the virus as the cause of sexually transmitted cervical cancer. Additionally, WHO works very closely with partners such as the Global Alliance for Vaccines and Immunization, which has included HPV in its portfolio of programmes.