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Eastern Mediterranean**

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Strategy for cancer prevention and control in the Eastern Mediterranean Region

Cancer is already an important public health problem in the Region and will become increasingly more important as populations continue to grow and age and as risk factors increase. Resources for cancer control in the Region are currently directed almost exclusively to treatment with little attention to prevention and early diagnosis. The Regional Committee is invited to consider and endorse a regional strategy for adaptation and implementation according to national cancer priorities and resources.

A draft resolution is attached for consideration by the Regional Committee.

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Executive summary

In May 2005, the World Health Assembly adopted a resolution on cancer prevention and control (WHA58.22), which calls on Member States to intensify action against cancer by comprehensive developing and reinforcing cancer control programmes. Because of the wealth of available knowledge, all countries can, in accordance with their resources, implement the six basic components of cancer control – prevention, early detection, treatment, palliative care, registry and cancer research – and thus avoid and cure many cancers, as well as palliate the suffering from cancer.

Cancer is already an important public health problem in the Eastern Mediterranean Region and will become increasingly important, not only in terms of rank order, as infections are better controlled, but also in terms of incidence and mortality, which will both increase as populations continue to grow and age, and as risk factors for cancer associated with greater affluence increase. Cancer is the fourth ranked cause of death in the Region, after cardiovascular diseases, infectious/parasitic diseases and injuries. It is estimated that cancer kills 272 000 people each year in the Region. In addition, the largest increase in cancer incidence among the WHO regions in the next 15 years is likely to be in the Eastern Mediterranean Region, with projection modelling predicting an increase of between 100% and 180%.

At present, resources for cancer control in the Region as a whole are not only inadequate but directed almost exclusively to treatment. This approach is suboptimal because full advantage is not taken of the impact of preventive measures on incidence, while the lack of approaches to earlier diagnosis reduces the value of therapy. Furthermore, in the majority of countries, cancer is generally diagnosed at a relatively advanced stage when cure is improbable, even with the best treatments.

The purpose of this paper is to present a regional strategy for prevention and control that will minimize the growing impact of cancer in the Region over the coming period (2009–2013). Although the most common cancers are breast cancer among females and lung cancer among males, there are variations in the incidence of the various cancers in the Region. Each country will have to adapt the regional strategy to their own needs, according to their cancer priorities and available resources.

Countries are at different stages of cancer planning development. The regional strategy for cancer control is intended to provide a foundation for the development of a comprehensive coordinated national approach to cancer that is resource-oriented. An important function of the regional strategy resides in its twin goals of sensitizing national health authorities to the need to control cancer more effectively, while at the same time providing technical guidance and a foundation for cooperation in this endeavour. A framework comprising approaches and strategic actions has been developed to support countries in developing work plans and in implementation.

1. Introduction

Cancer is already an important public health problem in the world, and will become increasingly important, not only in terms of rank order, as infections are better controlled, but also in terms of incidence and mortality. These will increase as populations continue to grow and age, and as risk factors for cancer associated with greater affluence, such as smoking and changes in diet (qualitative and quantitative) increase. The estimated number of new cancer cases diagnosed each year in the world is projected to rise from nearly 11 million in 2002 to 16 million by 2020. The majority of these new cases will occur in low-income and middle-income countries [1]. Data on the regional burden of cancer are both scarce and are often not of good quality. Thus it is not possible to provide a comprehensive and precise assessment of cancer impact in the Region. In May 2005, the World Health Assembly adopted a resolution on cancer prevention and control (WHA58.22) which urges Member States *inter alia* to intensify action against cancer by developing and reinforcing comprehensive cancer control programmes.

Cancer control aims to reduce the incidence, morbidity and mortality of cancer and improve the quality of life of cancer patients in a defined population, through the systematic implementation of evidence-based interventions for prevention, early detection, diagnosis, treatment and palliative care. Comprehensive cancer control addresses the whole population, while seeking to respond to the needs of the different subgroups at risk. Because of the wealth of available evidence, all countries can, in accordance with their resources, implement the six basic components of cancer control – prevention, early detection, treatment, palliative care, registry and cancer research – and thus avoid and cure many cancers, as well as palliating the suffering from cancer. Current knowledge indicates that 40% of cancers could be avoided (prevention), 40% could be cured if detected early, and suffering from the rest could be reduced with palliative care.

At present, resources for cancer control in the Eastern Mediterranean Region as a whole are not only inadequate but directed almost exclusively to treatment. This approach is suboptimal because full advantage is not taken of the impact of preventive measures on incidence, while the lack of approaches to earlier diagnosis reduces the value of therapy. The curability of cancer being directly related to its stage at the time of diagnosis. In the majority of countries of the Region, cancer is generally diagnosed at a relatively advanced stage when cure is improbable, even with the best treatments.

The purpose of this paper is to describe and seek endorsement of a regional strategy and framework for action to minimize the impact of cancer in the Region over the next five years (2009–2013).

2. Situation analysis

2.1 Global situation

Cancer is a global health problem which, by 2010, is projected to become the leading cause of death, ahead of ischaemic heart disease. The estimated number of new cases of cancer each year is expected to rise from 11 million in 2002 to 16 million by 2020. This increase will mainly be due to steadily ageing populations in both developed and developing countries, to current trends in smoking prevalence and the growing adoption of unhealthy lifestyles [2,3,4,5]. Cancer kills 15.7% of population worldwide – more than HIV, tuberculosis and malaria combined [3]. The growing cancer burden includes global increases of incidence of about 1% each year, with larger increases in China, Russia and India. This increase in incidence takes into account a projected population increase of 38% in developing countries between 2008 and 2030.

In developed countries the probability of being diagnosed with cancer is more than twice as high as in developing countries. However, while in developed countries some 50% of cancer patients die of the disease, in developing countries, 80% of people with cancer already have late-stage incurable tumours by the time they are diagnosed. This indicates the need for much better detection programmes in developing countries.

The most common cancers in developing countries are cancer of the breast, colon/rectum, uterus (endometrial carcinoma), gallbladder, kidney and adenocarcinoma of the oesophagus. These cancers are all closely linked with lifestyle. Epidemiological studies indicate that the frequent consumption of fruit and vegetables may reduce the risk of developing cancers of epithelial origin, including carcinomas of the pharynx, larynx, lung, oesophagus, stomach, colon and cervix.

The major difference in cancer between the sexes is the predominance in males of lung, liver, stomach, oesophageal and bladder cancer. For the most part, these differences derive from patterns of exposure to the causes of the cancers. To a smaller extent they reflect intrinsic gender differences in susceptibility.

More than one million cases of breast cancer occur worldwide every year, with some 580 000 cases occurring in developed countries (>300/100 000 population per year) and the remainder in developing countries (usually <1500/100 000 population per year), despite their much higher overall population and younger age. In 2000, the year for which global data exists, some 400 000 women died from breast cancer, representing 1.6% of all female deaths. The proportion of breast cancer deaths was far higher in developed countries (2% of all female deaths) than in developing countries (0.5%).

2.2 Regional situation

Noncommunicable diseases are already responsible for 60% of mortality in the world, and account for 52% of deaths in the Eastern Mediterranean Region [3]. Cancer is the fourth leading cause of death in the Region and its incidence is increasing rapidly. It is estimated that cancer kills 272 000 people each year in the Region. In addition, the largest increase in cancer incidence among the WHO regions in the next 15 years is likely to be in the Eastern Mediterranean Region, with projection modelling predicting an increase of between 100% and 180% [3,6,7]. In many developed countries, cancer has already exceeded heart disease as the number one cause of death, and if present trends continue, this could occur in the Region within the next 20 years.

Although cancer tends to become more frequent as people age, it is not a disease of ageing per se, the relationship with age is simply a reflection of the increasing impact of cancer risk factors, with accumulative effect increasing with acquired dose. Many cancers cause death in both women and men during their productive years, such as breast cancer in women, and lung cancer in men. The epidemic of lung cancer in men in many countries of the Region is particularly tragic as the cause of the majority of these cancers (cigarette smoking) has been known for over 40 years. For breast cancer, there is a substantial risk of future increase because of the impact of the increasing trend of obesity, linked to physical inactivity. Thus, although preventive measures take many years to achieve their full impact, it is critically important to act now to ensure that the knowledge applied now has impact within the lifetime of the majority of those currently living in the Region.

The most frequent cancers in the Region are breast cancer in females, and lung and bladder cancers in males. The magnitude of childhood cancer is also high and the survival rate is particularly poor compared with that in developed countries; most childhood cancers are cancers of the blood (leukaemia, and non-Hodgkin lymphoma). The projected increase in cancer can be attributed to population aging, better detection and registration and, most important, to increased

exposure to risk factors. The most important of these factors is tobacco consumption. Other risk factors include unhealthy diet, physical inactivity, other behavioural and lifestyle changes, pollution and increased exposure to industrial and agricultural carcinogens [3,4,5].

Table 1 shows the top five cancers in each of the countries in the Region [1]. Cancer does not occur with identical frequency in all countries, although there are many similarities. Thus there are variations in the incidence of various cancers in the Region. For example, stomach and oesophageal cancer have a higher incidence in the Islamic Republic of Iran and oral cancer a higher incidence in Pakistan. Breast cancer is among the four most common cancers in all countries. It is worth noting that cancer incidence does not correlate precisely with socioeconomic status. Somalia, Pakistan and Afghanistan, all low income countries, have high rates, while Oman, an upper middle-income country, has some of the lowest rates. This means that strategies for cancer control cannot be identical in all countries of the Region. Thus, each country will have to adapt the regional strategy to their own needs, according to their available resources.

Table 1. Top five cancers in the Eastern Mediterranean Region

Countries	Rank order of incidence				
	1 st	2 nd	3 rd	4 th	5 th
Afghanistan	Stomach	Breast	Oesophagus	Lung	Oral Cavity
Bahrain	Lung	Breast	Bladder	Colon	Prostate
Djibouti	Cervix	Liver	Oesophagus	Breast	Kaposi
Egypt ^a	Breast	NHL	Bladder	Liver	Lung
Iran, Islamic Republic of	Stomach	Oesophagus	Breast	Colon	Bladder
Iraq	Breast	Lung	Bladder	Larynx	NHL
Jordan ^b	Breast	Lung	Colon	Bladder	NHL
Kuwait	Breast	Lung	Colon	NHL	CNS
Lebanon ^b	Breast	Lung	Prostate	Bladder	Colo-rectal
Libyan Arab Jamahiriya	Bladder	Breast	Lung	Cervix	Colon
Morocco ^b	Rectum	Thyroid	Liver	Colon	Stomach
Oman ^b	Leukaemia	NHL	Breast	Stomach	Thyroid
Pakistan	Breast	Oral cavity	Lung	Oesophagus	Bladder
Qatar	Breast	Colon	Lung	Liver	NHL
Saudi Arabia ^b	Breast	Colo-rectal	NHL	Leukaemia	Thyroid
Somalia	Cervix	Liver	Oesophagus	Breast	Prostate
Sudan	Breast	Oral cavity	Cervix	Oesophagus	Liver
Syrian Arab Republic ^b	Breast	Lymphomas	Lung	Leukaemia	CNS
Tunisia	Lung	Breast	Bladder	Colon	NHL
United Arab Emirates ^b	Breast	Colon	Leukaemia	Lymphomas	Thyroid
Yemen	Breast	Oesophagus	NHL	Liver	Colon

Source: [4]

Source: GLOBACAN 2002, IARC

NHL: non Hodgkin lymphoma

CNS: centr nervous system

^a Gharbiah population-based cancer registry report 2000–2002

^b National cancer registry, Cancer incidence report, Jordan 2004, Lebanon 2003, Morocco 2004, Oman 2006, Saudi Arabia 2004, Syrian Arab Republic 2006, United Arab Emirates 2000–2004.

Based on the reported data on the prevalence of the two major risk factors (smoking and obesity) for cancer and other noncommunicable diseases (Table 2), it is apparent that in many countries, priority has to be allocated to cancer prevention and major efforts will be required to reduce the prevalence of the major risk factors to achieve more effective cancer control.

Table 2. Prevalence (%) of tobacco smoking and overweight/obesity in the Eastern Mediterranean Region

	Prevalence of tobacco smoking ^a (%)		Prevalence of BMI \geq 25 ^b (%)	
	Males > 15 years	Females > 15	Males	Females
Afghanistan	–	–	11.2	15.6
Bahrain	23.5	3.1	60.9	66.0
Djibouti	57.5	4.7	17.6	28.8
Egypt	35.0	1.6	64.5	69.7
Iran, Islamic Republic of	27.2	3.4	47.3	55.7
Iraq	41.5 ^c	6.9 ^c	63.6	69.6
Jordan	48.0	5.7	63.3	70.4
Kuwait	29.6	1.5	69.5	79.6
Lebanon	46.0	35.0	51.7	52.9
Libyan Arab Jamahiriya	–	–	47.6	56.0
Morocco	34.5	0.6	30.6	47.8
Oman	15.5	1.5	43.4	46.0
Pakistan	36.0	9.0	16.7	23.3
Palestine	40.7	3.2	–	–
Qatar	37.0	0.5	56.9	62.9
Saudi Arabia	22.0	1.0	62.4	63.0
Somalia	–	–	9.8	19.3
Sudan	23.5	1.5	16.0	27.0
Syrian Arab Republic	48	8.9	52.9	58.8
Tunisia	61.9	7.7	42.8	65.4
United Arab Emirates	18.3	<1.0	66.9	58.8
Yemen	77.0	29.0	24.6	27.8

^a Source: [2]

^b Source: [8]

^c Source: STEPwise survey Iraq, 2006

2.3 Current response and challenges

Although the previous regional cancer strategy (1997) [9] endorsed the concept of national cancer control planning, over the past 15 years few countries in the Region have so far made much progress in developing their national cancer control plans. This is in part because of a failure to recognize the emerging cancer epidemic, but also because of a failure to recognize the potential for cancer prevention and the needs for early detection in many countries. Even in those countries that have begun to address the problem, the response has been largely to put more resources into cancer treatment. This is a strategy that will do nothing to reduce the cancer burden in the long term.

Many cancers are diagnosed late with consequent poor survival. Health systems in most countries are not prepared to face the growing demand. Cancer is not a single disease and resources are

often insufficient for the control of cancer. Treatment for advanced cancers can be expensive with severe side-effects.

Other major challenges face the Region, slowing the progress towards a satisfactory response to the cancer problem. Cancer surveillance is not yet well developed, despite the undeniable achievements over the past decade. Several countries in the Region still lack population-based cancer registries. The importance of cancer registration cannot be over-emphasized for efficient planning and monitoring of progress.

There is also a pressing need to change the popular fatalistic attitude to cancer, and fear of its diagnosis. False beliefs and inappropriate attitudes regarding cancer are still prevalent in the Region. A large proportion of the public and some authorities still have the false belief that cancer is a dreadful disease and that little can be done to prevent or treat it. Such fatalism makes it difficult to allocate sufficient resources to fight cancer or to consider cancer among the top health priorities.

Human resources for cancer are very scarce in the Region and the available infrastructure is deficient in many countries as well. Effective mobilization of community resources requires efforts to change prevailing beliefs and attitudes, as well as to include different partners, community organizations and governmental and nongovernmental agencies in the fight against cancer. A multidisciplinary multisectoral approach is needed since many of the solutions are outside the health system. Regional cooperation is required in order to share experience, and enhance cooperation and communication. Last, but not least, the political instability in some countries of the Region and the current global financial crisis impede effective efforts in cancer prevention and control.

3. Regional strategy for cancer control 2009–2013

Goals and objectives

The regional strategy for cancer prevention and control 2009–2013 is in line with the WHO Global Strategy for the Prevention and Control of Noncommunicable Diseases [10] and the WHO strategy against cancer [11] and pursues the same goals which are:

- Prevent preventable cancers (through avoiding or reducing exposure to risk factors, i.e. prevention strategies)
- Cure curable cancers (early detection, diagnostic and treatment strategies)
- Relieve pain and improve quality of life (palliative care strategies)
- Manage for success (strengthening health care systems; management, monitoring and evaluation of interventions)

Objectives

1. To promote national cancer control planning and implementation among Member States.
2. To strengthen cancer prevention, early detection and cancer management.
3. To promote mobilization of resources for cancer control
4. To strengthen cancer registration and availability of reliable data and promote cancer research.

Targets

- By the end of 2013, 30% of Member States will have developed adequately resourced cancer control plans with measurable targets to demonstrate impact.
- By end 2013, at least 75% of Member States will be equipped with cancer registries and trained staff.
- By end of 2013, 50% of Member States will have core trained staff in palliative care.

Guiding principles

The 2009–2013 strategy for cancer prevention and control in the countries of the Eastern Mediterranean Region is intended to provide a foundation for the development of a comprehensive coordinated national approach that is resource-oriented. It emphasizes improved communication and regional collaboration, such that the benefits of concerted action can be realized. It cannot replace national cancer control planning, for which guidance has been published by WHO [12], but may lead to more effective national planning through the ability of countries to learn from each other and to participate, where appropriate, in joint endeavours.

Key interventions

To achieve the strategic objectives at different levels, a regional framework comprising a set of seven approaches for country action has been developed.

Approach 1: Establish and strengthen comprehensive national cancer control plans, policies, legislation and regulation to support plans for cancer prevention and control.

Strategic actions

- Develop national cancer control plans or update existing plans.
- Establish/reactivate a national cancer control committee headed by a prominent high-level person, with established terms of reference. The committee should be responsible for all cancer control activities in the country.
- Establish technical sub-committees for all aspects of cancer control including prevention, cancer registration, surveillance, early detection, treatment, palliative care, capacity-building, research, monitoring and evaluation. These committees should be in charge of developing the national cancer control plan and its action plan.
- Ensure that the national cancer control plan is aligned with the regional cancer control strategy.
- Adopt and implement all related global and regional initiatives, such as the global strategy on noncommunicable diseases prevention and control, Framework Convention on Tobacco Control and global strategy on diet, physical activity and health.

Approach 2: Assess the cancer burden, risk factors and provision of services.

Strategic actions

- Assess the magnitude of the problem of cancer in the country.
- Assess the pattern of cancer and most common risk factors.
- Identify the required financial resources.
- Assess national capacity in prevention and control of cancer: financial resources; human resources; equity in distribution of services and accessibility; cancer registry, surveillance and database; availability of medicines; presence and strength of nongovernmental organizations working in the field of cancer control; cancer research;

Approach 3: Advocate for increased priority accorded to cancer control and strong political commitment for national health planning.

Strategic actions

- Design and implement an advocacy campaign to mobilize political support for the national action plan for cancer prevention and control through the mass media, and involving community and religious leaders and prominent personalities.
- Advocate for necessary legislation and regulations to reduce exposure to risk factors.

Approach 4: Develop the required mechanisms for implementation of cancer programmes.

Strategic actions

- Develop the required human resources, plan and build the capacities of health professionals required for cancer control through regular training and training of trainers.
- Develop high level education programmes to create leaders in the different fields of specialization.
- Identify gaps in knowledge and obstacles and recommend actions within the country.
- Strengthen continuing medical education in cancer control.
- Strengthen the curricula on cancer control in undergraduate and postgraduate education.
- Utilize available training resources in the Region.
- Ensure adequate assessment and proper management of equipment and technology.
- Strengthen the integration of cancer prevention and control in primary health care.
- Create an efficient and effective referral system.
- Develop an appropriate information system for monitoring and evaluation of the programmes and select appropriate indicators.
- Mobilize resources for cancer control, involving all stakeholders, and establish a national network of partners.

Approach 5: Strengthen the primary prevention and early detection of cancer and support their integration into primary health care.

Strategic actions

- Advocate adoption of healthy lifestyles and promote environments conducive to adoption of healthy lifestyles.
- Strengthen cancer-related immunization programmes.
- Strengthen health education programmes to increase public awareness about the risk factors for cancer, especially tobacco use, through involvement of the community, relevant nongovernmental organizations and the media.
- Support integration of cancer prevention into primary health care.
- Promote early detection and screening for breast and cervical cancer.

Approach 6: Improve cancer management and support palliative care and pain relief.

Strategic actions

- Strengthen cancer diagnosis and treatment programmes through all levels of care to ensure that the majority of cancer patients have access to sufficient treatment facilities.
- Promote and implement interventions in childhood cancers at different levels of the health system.
- Strengthen development of human resources in cancer management.
- Develop or strengthen palliative care services, including promotion of community nursing and home care.
- Ensure accessibility and affordability of palliative care medicines.
- Support integration of cancer management and palliative care in primary health care.

Approach 7: Support cancer surveillance and research.

Strategic actions

- Establish/strengthen and promote cancer registries.

- Conduct population-based cancer prevalence surveys to produce systematic and reliable data
- Increase investment in research and promote operational research as an integral part of cancer prevention and control in order to identify knowledge gaps and evaluate strategies.

4. Conclusion

Cancer is the fourth leading cause of death in the Region and incidence is increasing rapidly. Cancer is already an important health problem in the Region and will become increasingly important in terms of rank order, as infections are better controlled, and in terms of incidence and mortality, which will both increase as populations continue to grow and age, and as the risk factors for cancer that are associated with greater affluence increase. In May 2005, the World Health Assembly adopted a resolution on cancer prevention and control (WHA58.22) which calls on Member States to intensify action against cancer by developing and reinforcing comprehensive cancer control programmes. Action is urgently needed to address the growing burden of cancer in the Region. Priority areas for intervention are primary prevention and early detection, particularly of breast cancer; integration of cancer interventions into primary health care; and promotion of palliative care, including community nursing and home care.

The regional strategy for cancer prevention and control provides a foundation for the development of a comprehensive coordinated national approach to cancer that is resource-oriented. The Regional Office will provide technical support to facilitate the development of national cancer control plans; advocate for political commitment for cancer control; support capacity-building in all components of the cancer control programme, sharing of experiences and follow-up the implementation of the national plans; support regional cancer research activities; and collaborate with other partners involved in the field of cancer control for alignment of activities and mobilization of resources.

Recommendations to Member States

1. All countries should adapt the regional strategy for cancer control according to national needs and resources, as identified by situation analysis.
2. Those countries that have not yet commenced the process of developing a national cancer control plan should establish a national cancer control committee and finalize a plan in line with the regional strategy.
3. The national cancer control committee of those countries that are in the process of developing a national cancer control plan should revise and finalize the plan in line with the regional strategy.
4. The national cancer control committee of those countries that have already developed a national cancer control plan should review and update the plan in line with the regional strategy.

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