

**National Plan Cancer Control
2014-2025
Kingdom of Saudi Arabia
Ministry of Health
Assistant Deputy Ministry for Preventive Medicine
Non-communicable Diseases Directorate
Cancer Prevention Program**

PART 1

Introduction and the scientific justification for cancer control program

Introduction

Introduction:

Cancer is the leading cause of mortality worldwide (7.4 million deaths), about 13% of total deaths in 2004.

The main types of cancer responsible for most of the deaths each year are:

- Lung cancer (1.3 million deaths/year).

- Stomach cancer (803000 deaths/year).
- Cancer of the colon and rectum (639000 deaths/year).
- Liver cancer (610000 deaths/year).
- Breast cancer (519000 deaths/year).

More than 70% of all cancer deaths occur in medium and low-income countries, and it appears that deaths from cancer worldwide is expected to continue increasing to reach 12 million deaths by the year 2030.

Incidence and mortality have reached a plateau and appear to be dropping in both United States and parts of Western Europe. This decline has been attributed to several factors such as early detection through the use of screening mammography and appropriate use of systemic adjuvant therapy.

In Saudi Arabia, the total number of cancers incidence reported to the SCR in 2006 was 11040 affected 49.6% males and 50.4% females,8253 cases were reported among Saudies.

The crude incidence rate (CIR) of all cancers among Saudi population was 44.6 / 100000 and the over all age standardized incidence rate (ASR) was 83.2 / 100000 and the median age at diagnosis was 60 years for men and 50 years for women ,the five geographic region with the highest ASR were Riyadh region at 98.1 / 100000, Eastern region at 94 / 100000, Tabuk region at 89.6/ 100000, Makkah region 77.7 / 100000 and Madinah region at 77.2/100000. Top ten most common cancers in the Kingdom, shown in the following table:

Top ten most common cancers among Saudis 2006 (all ages).

Type of cancer	Number of cases	Frequency (%)
Breast	999	12.4

Colo-rectal	784	9.7
Non-Hodgkin lymphoma	585	7.3
Thyroid	541	6.7
Leukemia	508	6.3
Liver	416	5.2
Skin	327	4.1
Lung	312	3.9
Hodgkin diseases	293	3.6
Stomach	275	3.4

The most common cancers in men, colorectal cancer (10.6 %), and in women breast cancer (23.6 %).

The frequency of different cancers differs markedly by age and sex. In children (age 0-14) the leading cancer was leukemia which accounted 31.7 %, followed by brain and nervous system 14.3 % then Hodgkin disease 12.9 %. The most common cancer at ages 15-29 years is Hodgkins disease in males, and thyroid cancer in females, followed by leukemia and then non-Hodgkin's lymphoma in males, and Hodgkin's disease and breast cancer in females. At ages 30-44 years, breast cancer in females becomes predominant, followed by thyroid cancer and colorectal cancer, in males NHL is most frequent, followed by colo-rectal and Hodgkin disease. At ages 45-59 years, breast cancer in females remains predominant, followed by colorectal and thyroid cancer, in males, the order of the first three is colorectal, non-Hodgkin's lymphoma and liver, At ages 60-74 breast cancer is still number one in females, followed by colorectal and non-Hodgkin's lymphoma, in males the order is colorectal ,liver and lung . Finally, at ages 75 or more, prostate cancer is number one in males, followed by liver, and colo-rectal ,and in females the order is breast, skin and colo-rectal.

scientific justification for the cancer control program

The scientific justification for the cancer control program:

*cancer has become a health problem in developing countries as in developed countries.

*cancer is the second cause of mortality and morbidity in developed countries.

*two-thirds of expected cancer cases in the world during the next decade will be in developing countries

*Incidence of cancer in developing countries going to be the same to as in developed countries, a result of:

- Control of endemic infectious diseases and the resultant decreased mortality rates.

- Increase in the life expectancy in developing countries.

- Increased prevalence of smoking more than the developed countries.

- Changing of many patterns of life and similarities to the patterns in developed countries (food habits / social / industrial / industrial pollution linked to cancer etc.).

*financial burden of cancer more than other diseases, (one fold or three), which a heavy burden even in developed countries.

*the social / economic sequences of cancer adversely affect the development of the community.

*Some cancers can be cured if detected and treated very early using simple medical treatment and not costly.

*cancer can be prevented. About 80 to 90% of cancer cases can be attributed to the behavior and environmental factors, while the rest of the factors to genetic factors, or unusual genetic factors.

*At least 30% of all of cancer can be prevented through the adoption of integrated measures that are accurately structured.

*Smoking is responsible for approximately 30% of cancer deaths in the world, though judging by the 2004 incidence rates, it is probable that the figure is no more than 15% in males, and 5% in females, in Saudi Arabia.

*the effective role of anti-smoking measures led to reduction of deaths due to lung cancer in Western countries.

*approximately 50% of cancer cases can be attributed to dietary habits, obesity and lack of physical activity in the West, and the figure in Saudi Arabia is probably similar.

epidemiological evidence suggested that the consumption of vegetables, fruit and fiber-rich diet to protect or prevent certain types of cancer (colon, rectum, stomach, esophagus), while fat-rich diets (especially animal fat) accompanied with the risk of more specific types of cancer (breast, prostate, endometrial cancer, ovarian, colon).

*early detection programs that are well-designed and implemented for certain type of cancers (cervical, breast, mouth) associated with the presence of an effective treatment can lead to a marked reduction of cancer incidence and mortality.

*breast cancer screening using mammogram for women between the ages of 50 and 69 years, will reduce breast cancer mortality by 25-30%, assuming full coverage of the target group.

*cytological screening for cervical cancer once every 10 years leads to a reduction of incidence of the invasive cancer by 60% in women between the ages of 35 and 64 years assuming full coverage of the target group.

Involved in the implementation of the program:

1. Decision makers in the health sector.
2. Those related to the control of cancer.
 - Ministry of Health with various departments.
 - specialized cancer centers.
 - other health institutions (hospital - primary care centers).
 - non-governmental organizations.
 - Universities.
 - The relevant governmental departments (Information - Education - Religious Endowments).
 - the private sector.

Program elements:

- sub-program for the preparation and administrative organizing for the general program.
- sub-program of early detection.
- educational program for the prevention of cancers associated with viral diseases, nutrition, and industrial pollution and radiation, alcohol and harmful sun exposure.
- sub-program of palliative care.
- sub-program for the development of and means for the curative systems of cancer and scientific support.

First: the setup program and administrative management:

A - Objectives:

1. Preparation for the start of the program and its management technically and administratively.

2. Coordination between the agencies responsible for implementation and the target groups.
3. Supervising the financial aspects.
4. Resource allocation and periodic evaluation.

B-Program components:

- The formation of the Supreme National Cancer Control Committee (NCCC)/ selection of the head / members / sub-committees.
- Confirmation of government commitment to support the program.
- Agreement on priorities and the timeline of the program work.
- Forming the administrative framework of the program / establishing financial rules of the program.
- Formation of technical framework.
- Formation of technical assistant framework.
- setting up and preparation of peripheral and central oncology clinics.
- Coordination with other health sectors, to participate in the program.
- Coordination with the ministries, legislative bodies and non-governmental organizations.
- Develop a mechanism to work in clinics, transfer of cases and follow-up.
- Supervising the preparation of different educational and promotional materials and the design of web site.
- Setting a timetable of activities / weekly / monthly for the program supervision and follow-up.
- Allocating budget of the main program and sub-programs / identification of funding sources / charities to address the contributions.
- organization of workshops to launch the program.
- organizing a national conference to control cancer.

Second: a program of early detection:

A- strategic objective:

A - in the short term (five years):

Early detection of most tumors (breast, cervix, colo-rectum, mouth, skin) in early treatable curable stages.

B - in the long term (ten years):

Reduce the mortality rate of these tumors by about 20%.

B- Program components:

- Surveys on the stages of cancer for these tumors / concept of investigation and the early detection for the target group.
- Identification of target groups for the program.
- Establishment of sub-clinics, all regions for oncology and early detection and one central clinic for the diagnosis of detected cases.
- Specialized medical teams to the work in the central and sub-clinics.
- Teams of volunteers for the dissemination of health awareness.
- Training programs for primary care health workers.
- Training programs for volunteers.
- Educational programs with particular contents for the target groups.
- Diagnosis of cases and the follow-up system.
- evaluate the results of the program.

Third: Educational Program for the prevention of cancer:

A-Goals:

a - short-term goals (five years):

1. Changing dietary habits and return to the patterns of local food / dissemination of awareness of physical exercise / decrease of worker exposure to carcinogens in the work field to less than 10% of / decrease in the incidence of HIV HBV and HCV carriers/ reducing the exposure to sunlight for more than 50% of adults.

2. Reduction in the incidence of diseases (such as heart / arterial diseases / liver cirrhosis / skin damage caused by the sun).

b - the long-term goals:

1. Reduction in the incidence of cancer (colon, rectum) within 10 years
2. Reduction in the incidence of cancer (breast, lung) within 30 years

B-Program components:

- surveys to determine the dietary habits and patterns / percentage of people living with hepatitis viruses (B and C) / carcinogens present in the environment and the workplace, food
- Identification of target groups of the program.
- Education for prevention.
- Support the relevant legislation at the local / international level, including WHO's MPOWER program.
- Cooperation between the Ministries of the State concerned the elements of the program.
- Evaluation of the results of the program.

IV: Palliative care program:

A-Palliative care:

What:

Way to improve the quality of life of patients and their families who face the disease, accompanied by life-threatening illness through the prevention and elimination of suffering through the diagnosis and early assessment and treatment of pain and other problems - physical, psychological and spiritual.

Palliative care:

- o provides the elimination of pain and other disturbing symptoms.
- o stresses of life and death is considered natural.
- o is designed to speed up or postpone death.
- o depends on the comprehensive point of view to identify the needs of patients and their families, including advice on receiving news of cancer.
- o provide a support system to help patients to live as effective as possible until death.
- o provide a support system to ease the burden on the patient's family during the illness and the tragic.

- o improve the quality of life and a positive impact on the course of the disease.
- o apply early in the course of the disease accompanied by other treatments, which left in order to prolong life, such as chemical treatment and radiotherapy.
- o include the necessary surveys to understand and manage distressing clinical complications.

B- Program components:

- Formation of a Commission for the preparation of palliative care guidance.
- The development and standardization of palliative treatment protocols in hospitals and health centers.
- setting up pain clinics in hospitals.
- Training (doctors, nurses / pharmacists / paramedics and medical assistance). Education (medicine decision-making / pharmaceutical management / administrative staff / patient).
- Provision of opiate and non-opiate medicines to patients.
- support of the hospitals the terminal home care.
- Construction of the terminal-care centers and palliative for cancer patients.
- To amend the legislation on opiate drugs, tranquilizers and circulation routes for patients.
- Psychosocial, religious, and financial support for the terminal stages cancer patients.

C- Procedures necessary for the development of palliative treatment:

- o Government policy to ensure the integration of palliative care to health services structure and financial support for national health care system.
- o Government policy to ensure the availability of oral morphine
- o educational policy to ensure support for the training of health-care providers, volunteers, and the general community.
- o drug policy to ensure the availability of key medicines to manage pain and other symptoms and psychological pain and, in particular, opiates.

D- Stages of a plan to provide treatment and application of palliative care:

- o assessment of the number of people who are in need of palliative care cancer (based on the number of deaths from cancer).
- o assess the needs of patients from health care providers, and family.
- o identify the target group for palliative treatment.
- o identify gaps and problems of existing palliative care services.
- o identifying the goals and targets of palliative treatment.
- o the development priorities of palliative care.

- o secure the necessary resources to provide palliative care.
- o the organization of care services at all levels of palliative care.
- o the adoption of the idea of the team.
- o define the role of health care providers (doctor, nurses, social service providers and mental health., the sponsors of the psychological and spiritual counseling, volunteers, traditional healers).
- o the training of caregivers.
- o to ensure the availability of key medicines to manage disease and other symptoms.
- o the development of the standard level required for the palliative treatment.
- o evaluation and follow-up of the plan and the activities to be implemented.

program for systems and means for the treatment of cancer and scientific support:

A- Objectives:

- a - recovery.
- b - The development and upgrading of the cancer treatment.
- c - The standardization of the cancer treatment regimens.

B- Program components:

- Formation of the Commission for the preparation, deployment and standardization of protocols and treatment systems of tumors.
- Integration of activities of early detection with the health system.
- Policy of transfer cancer cases between hospitals and the specialized centers.
- Ethics committee in the area of cancer research / treatment of patients.
- Local conferences and periodic workshops (yearly).
- Program for the visit of experts from the international centers.
- Link to one of the international centers as a reference.

PART 2

Strategies of cancer prevention program

Vision:

Protection of the Saudi society against cancer as a common responsibility of all society groups.

Mission:

Promote health awareness of the Saudi society about cancer and the risk factors leading to it , and the strengthening of screening programs and integrated health care at the three levels in accordance with the scientific evidence-based principles and methods, through the appropriate use of

resources to reduce morbidity and mortality, with the participation of all governmental and private institutions and within the concept of partnership of the community health.

The plan includes seven objectives:

Objective 1: primary prevention of cancer.

Objective 2: Secondary prevention of cancer.

Objective 3: To improve the quality of health services provided to the cancer patients at the three levels.

Objective 4: Strengthening the means of surveillance, monitoring and evaluation program of cancer control.

Objective 5: conducting and strengthening the research and studies related to cancer.

Objective 6: involve patients and their families to participate in the services provided and quality control.

Objective 7: community partnership to control cancer.

OBJECTIVES

First Objective: primary prevention of cancer

First Objective: primary prevention of cancer.

Goal:

1* Reduce the incidence of risk factors that lead to cancer in Saudi Arabia over the next ten years by:

- Reduce the rates of tobacco use (current and occasional smokers) among adults by 5% (an average of 0.5% annually), double the percentage of ex-smokers within 10 years (an average of 10% per year).

- Reduce the prevalence of overweight and obesity by 10% as a minimum (i.e., the rate of 1% per year).

- Increase the proportion of practitioners of physical activity by 20% as a minimum (i.e., the rate of 2% per year). This program should commence in childhood, continue into adolescence and throughout life. Playgrounds should be established for children, physical activity should be encouraged in schools. To increase the levels of physical activity of adults in the community, the plan or there is should a comprehensive vision that embraces not only the health sector but also the sports sector, and means of recreation and urban planning. In planning for the construction of cities, accommodation, national governments need to ensure the availability of facilities and services for physical activity; transport policies should encourage walking and cycling and discourage car use. Change the structure of the environment to induce increased levels of physical activity. Rates of walking and cycling to increase in communities with high population density, programs that promote the free days of car use and encourage walking and cycling routes through the closure of the traffic signals showed good social participation. Establishing a reliable transport system encourage walk, train, bus supports increased levels of physical activity more than the transportation system, which relies heavily on the use of cars.

It is necessary to create a special policy for women to exercise in a protected environment, and also there is a need to provide security to enable people to walk or ride a bicycle safely. Orientation from physical specialists with written bulletins health has its impact. It has been approved by the members of the World Health day a year celebration under the slogan of the (Movement for Health) to promote physical activity. This campaign aims to increase regular physical activity in men and women of all ages and conditions, places and areas (schools, community houses, places of work).

- Promote healthy diet: attained by the following:

- o adjusting the energy obtained from full-fat and the conversion of the total consumed fat from saturated to unsaturated fat and eliminate trans fatty acids production and consumption.

- o increased consumption of fruits and vegetables, cereals, legumes, nuts and fiber.

- o reducing the consumption of refined sugars, change to consumption of complex carbohydrates.

- o adjusting salt consumption from all sources and ensure that it's iodized.
- o Special diet for the prevention of cancer:
 - * reduce the consumption of salted fish and fermented Chinese-style, especially in childhood.
 - * reduce the consumption of red and processed meat
 - * reduce the exposure to aflatoxin in food.
 - * avoid eating very hot foods and drinks.
- o Effective ways to promote healthy diet at the level of people and individuals:
 - * commercial offers to encourage purchase fruits and vegetables.
 - * clearly identify the contents of processed and marketed food.
 - * provision of healthy meals in schools, the workplace and the rest of the facilities.
 - * easy accessibility to personal advice for good nutritional habits as part of the health services.

- Reduce exposure to environmental carcinogens.

chemical and environmental factors are some of the carcinogens that can be possibly prevented through the stopping and reducing exposure, for example, cancer is caused by arsenic in drinking water in China (Province of Taiwan), which declined after the introduction of measures to reduce its concentrations in the sources of water. The following strategies to reduce exposure to carcinogens are known to be effective:

- o establish a legislative framework that address the role of chemical agents to cause cancer and stopping or reducing exposure to chemical carcinogens and includes procedures for the replacement, reduction of concentration of carcinogens in products and legislation of standards for the quality of drinking water.
- o health education using different tools and raising awareness (through the government committees responsible for industry, chemicals, industrial organizations, trade unions, consumer organizations) choosing the appropriate forms of the target groups.
- o facilitate access to sources of information such as international safety card for chemicals (<http://www.who.int/ipcs/en/>)
- o pass workers right to know legislation

- Reduce exposure to occupational carcinogens:

The prevention of exposure to occupational carcinogens depends strongly on the creation of legislation to control the use of known carcinogens

in the work environment, the systematic assessment of the danger of carcinogens in the workplace and in all phases of work, alternatives to chemical carcinogens that are less hazardous, and technical procedures to reduce human exposure.

Procedures for the effective prevention of occupational cancer, follow gradually the following:

*Reduce the use of carcinogens in the work environment by replacing them with less hazardous materials which is the most effective procedure.

If the replacement is not possible actions should be taken to protect or decrease the risk of worker exposure to carcinogens, usually through the closed or isolated operation, which does not allow liberation of the carcinogens in the environment work.

*If the exposure to carcinogens is not under control, it is necessary to adjust the amount of carcinogens in the work environment, depending on the values of the threshold set by the qualified national authority.

*Finally, in case if not possible to ensure that the exposure is within acceptable limits, the workers must be protected by means of personal protection devices.

*In some cases, it may be necessary to organize a surveillance system to monitor the health of workers aiming for early detection of cancer resulting from the work environment, although for most of the cancers arising from the work environment, especially lung cancer, there is no evidence that such interventions are effective.

- Evaluate the prevalence of Human Papilloma Virus (HPV) infection in young women, and introduce vaccination if the prevalence is high and rising. It seems probable, given that the incidence of cancer of the cervix is so low, that the prevalence of HPV infection is also low, thus not justifying a vaccination policy. To determine the present status, a well designed prevalence survey of women age 20-25 should be performed. If low prevalence is confirmed, the survey should be repeated (in new samples) at approximately 5 year intervals. The use of condoms provides partial protection against human papillomavirus (HPV) infection. The consistent and correct use of condoms has shown to decrease the danger the pre-cancerous infections of cervix and cervical cancer. Vaccination against HPV is another tool to reduce the occurrence of cervical cancer. Vaccine has shown excellent protection against the Human Papilloma virus infections of modern and chronic pre-cancerous lesions and the medium-and high of the patterns (16-18) of the virus, which cause approximately 70 % of cervical cancers. At the beginning of 2007, one vaccine against HPV was licensed in more than 70 countries and the second vaccine was sent to be evaluated by regulatory authorities of vaccination in the United States and Europe. It's possible for many countries to choose the girls before the age of adolescence as a target for vaccination, but the decision is related to the epidemic, domestic social and cultural situation, and is not justified if the prevalence of infection in young adult women is low.

- Reduce the prevalence of infection with hepatitis type B:

The most effective strategy for the prevention and the prevention of primary liver cancer is a comprehensive vaccination against hepatitis

B. Vaccination strategies depend on the epidemiology of HIV infections, hepatitis B, and the development of a chronic hepatitis B infection associated inversely with age at infection. Often 90% of people infected at birth develop chronic hepatitis compared with 30% of those infected in early childhood, and 6% of those infected after the age of five years. WHO has recommended a vaccination of infants against hepatitis B through incorporation into the national expanded vaccination program, by giving three doses. The first dose must be given during the first 24 hours of birth in countries with high proportion of chronic hepatitis at birth. Another strategies other than vaccination, which includes the application of safe injection practices and infection control in health-care activities to reduce both the infection of hepatitis B and C, and strategies of changing different behavior, which target unsafe injection practices and high-risk sexual practices.

Goal indicator:

1. Prevalence of tobacco use among adults 18 years and older and adolescents (13-15 years) by using (Global Youth Tobacco Survey)
2. prevalence of overweight (BMI 25-29.9 kg / m²), and obesity (BMI \geq 30 kg / m²).
3. Prevalence of central obesity (Waist-to-hip ratio, 0,85 for men and 0.95 for women)
4. prevalence of central obesity (Waist circumference, 94 cm for men and 80 cm for women)
5. The proportion of community members (adults and school children) who practice physical activity as defined by the World Health Organization in accordance with methodology of the epidemiological surveillance of chronic diseases (Stepwise Surveillance System)
6. The proportion of members of the community who eat 3-5 daily portions (400 g / day) of fruit and vegetables according to age group.
7. The proportion of indoor tobacco-free places.

- 8. The prevalence of infection causing cancer.
- 9. The proportion of people exposed to carcinogens (environmental and occupational).

STRATEGIES

Strategy 1	Mechanism of implementation	Indicators of mechanism of implementation
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1.Raise health awareness about the risk factors leading to cancer	1. Implementation of programs and field awareness campaigns and through media about risk factors and means of avoidance. 2. The inclusion of cancer within the scientific subjects in school curricula	1. The proportion of members of the community who are aware of risk factors of the total respondents, and the proportions after the application of educational program 2. The number of programs and campaigns carried out in each area 3. The number of schools that include cancer within the scientific subjects in the curriculum
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Strategy 2	Mechanism of implementation	Indicators of mechanism of implementation
2. To encourage healthy nutrition and physical activity among the various age groups in society	1. The development and application of the national strategy on food and physical activity and health (in the light of the WHO strategy). 2. The inclusion of physical activity and intensify it as a basic compulsory subject in schools. 3. Campaigns to encourage the practice of hiking in the community. 4. Further promote the establishment of walking tracks and parks within reasonable distance of the residents in the region.	1. The existence of a national strategy on food and physical activity and health. 2. The application of the elements of the national strategy on food and physical activity and health 3. The number of hours of physical activity in schools. 4. The number of campaigns to raise awareness of physical activity. 5. The number of walking tracks for each 10,000 inhabitants. 6. The number of parks to walk to each 10,000 of the population.

Strategy 3	Mechanism of implementation	Indicators of mechanism of implementation
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<p>3. Promotion of healthy nutrition in the community</p>	<ol style="list-style-type: none"> 1. Improve the quality of foods provided in school canteens. 2. The integration of information on healthy nutrition and risk factors for cardiovascular diseases and cancer in scientific materials in school curricula. 3. Implementation of the programs of community awareness about healthy nutrition for the prevention of cardiovascular diseases and cancer. 4. Training of health practitioners (doctors / nurses / dietician) about healthy nutrition for the prevention and treatment of heart and vascular diseases, diabetes and cancer. <p>s</p>	<ol style="list-style-type: none"> 1. The number of schools that provide healthy food in canteens. 2. The extent of integration of information in food science. 3. The number of nutrition education programs implemented in the year. 4. The number of training programs implemented in the year.
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Strategy 4	Mechanism of implementation	Indicators of mechanism of implementation
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<p>4. Enactment of legislation that work to reduce risk factors such as: (the laws of food and beverage labeling and advertising of fast food and anti-smoking laws, etc.)</p> <p>5.Laws for the protection of the environment (water, food and air), public health and occupational.</p>	<p>1. Draft the necessary legislation.</p>	<p>1. The number of legislation to combat the risk factors</p> <p>2. The commitment of each State applying the Convention on the World Health Organization on tobacco control</p> <p>3. Compliance with laws, if any</p>
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Second objective: Secondary prevention of cancer

Objective 2: Secondary prevention of cancer

Goal:

1. Early detection of cancer when it is localized in the primary organ before the invasion to neighboring tissues and organs and detection of pre-cancerous lesions.

There are two basic constituents of early detection:

- o early diagnosis.
- o screening.

Early diagnosis:

Is to raise awareness of public health service providers on the signs and symptoms of early cancer diagnosis in order to speed up before it becomes advanced tumor stages. This makes the processing simpler and more effective. The concept of early diagnosis is sometimes referred to as stage reduction (down-staging).

Screening:

Is the systematic application of the test when it is assumed that people have no symptoms. It aims at identifying persons who have abnormalities suggestive of a cancer. They need diagnostic procedures and effective treatment.

Program of early detection of breast cancer:

The priority of the Program:

- high incidence of breast cancer in the KSA are relatively compared with other cancers.
- Early detection of breast cancer leading to a reduction in the proportion of deaths to ~ 30% (according to global studies), but only in women age 50-69.

- There are ways to ensure early discovery of breast cancer
- There is a potential for benign disease to be identified and non-progressive cancers
- Many of the developed countries and some developing nations have breast screening programs.

Major problems participate in increased incidence of breast cancer in the KSA (main problem):

- delayed diagnosis (where 50% of cases are diagnosed in advanced stages)
- high incidence of risk factors that cause disease, poor procedures, including primary prevention possibly genetic susceptibility.

The objectives of the program:

In the short term: the early detection of breast cancer in the early treatable and curable stages.

In the long term: the reduction of mortality by 25-30% in women age 50—69, and by 15% in women age 40-49.

Program components:

- Surveys on the stages of breast cancer.
- identify the target group.
- Establishment of oncology sub-clinics in the regions early detection, and one central clinic for the diagnosis of cases detected.
- Specialized medical teams to the work of the central sub-clinics.
- Teams of volunteers for the dissemination of health awareness.
- Training programs for primary care health workers.
- Training programs for volunteers.
- Educational programs of particular elements for the target groups.
- Diagnosis of cases and the follow-up system.
- Evaluate the results of the program.
- Upgrading of the program based on the results of the evaluation of the program

Indicators of Program:

1. 75% coverage of the mammogram screening of target group every 3 years.
2. Decrease the proportion of patients who are diagnosed with late stages of cancer (stage 3 and 4) to 20%.
3. To ensure that all women who have abnormal mammogram be referred and receive the diagnosis and urgent treatment in specialist centers.
4. Reduction in the presence of advanced cancer at diagnosis to 10% in women.
5. Decrease in the mortality rate of breast cancer after 10 years to 25% or more

STRATEGIES

Strategy 1	Mechanism of implementation	Indicators of mechanism of implementation
1. Early detection of breast cancer.	1. The implementation of educational programs and regularly to all staff of health care (Health care professional) about the signs and symptoms of breast cancer. 2. The application of an integrated national program for the early detection of breast cancer using mammogram (systematic screening) for the age group of women (40-65 years).	1. The implementation of educational programs 2. Establishment of a register of early detection 3. The number of cases detected early by screening (Absolute). 4-Proportion of detected cases out of target number (according to disease stages). 5-Coverage and response rates.
Strategy 2	Mechanism of implementation	Indicators of mechanism of implementation

2. care of healthy people to reduce risk factors in primary health care.	1. Development of well-being women clinics Identify early clinical signs for early detection of breast cancer.	1. number of well-being clinics. 2. The presence of clinical guidelines.
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Third objective: improve the quality of health services provided to the cancer patients at three levels

Objective 3: improve the quality of health services provided to the cancer patients at the three levels

Goals:

1. Activating the role of primary care centers in the awareness and early detection and care.
2. Availability of specialized centers for diagnosis, treatment and easy access to it (according to global standards).
3. The development of an integrated system of palliative care.
4. Development of the system of ongoing home care.
5. Providing care for patients through an integrated multidisciplinary group (surgeons, radiation and medical oncologists, specialists in palliative care, oncology nurses).
6. Regulate the relationship between the three levels of care for cancer patients.

Goals indicators:

1. The proportion of patients in the audit of primary care clinics compared to auditors in the care (the second and specialized).
2. The proportion of specialized medical personnel in accordance with the rates the World.
3. Trainers per annum of the total target.
4. The presence of clinical treatment guides based on the evidence.

STRATEGIES

Strategy 1	Mechanism of implementation	Indicators of mechanism of implementation
1. The provision of qualified human resources in the field of cancer treatment	1. Completion of an integrated medical team in the secondary and tertiary care	1. The ratio of secondary and tertiary care, mentioned the difference of the target 2. The proportion of specialized medical personnel in accordance with the rates the World.
Strategy 2	Mechanism of implementation	Indicators of mechanism of implementation
2. upgrading of health workers in primary health care in the cancer control.	1. Development of training programs in the care of cancer patients and risk factors for all health workers, such as: 2. Awareness and health education. 3. Early detection. 4. Palliative care.	1 - the proportion of the total trained annually the target for all categories of health:

Strategy 3	Mechanism of implementation	Indicators of mechanism of implementation
3. Development of care services and the second specialized in the cancer control.	1 - and the establishment of cancer units in hospitals, reference 2 - Establishment of specialized centers (third level) in the treatment of cancer and its complications and the rehabilitation of patients	1. The existence and treatment of cancer units in hospitals, reference 2. The number of specialized centers (third level) for each million
Strategy 4	Mechanism of implementation	Indicators of mechanism of implementation
4. The presence of fixed criteria and based on common evidence and scientific evidence and up-to-date on the world scene	1 - Find and updated manuals for health workers in the field of cancer treatment regularly 2. Develop a guide to appropriate nutritional guidance 3. Develop a guide for the care Euphemism 1. No evidence of the work of an updated clinical practice	1. Existence of updated guidelines for clinical practice. 2. The proportion of therapeutic medical units geared guide clinical topic 3. There is evidence of the care of Euphemisms 4. The proportion of units of care geared Euphemism
Strategy 5	Mechanism of implementation	Indicators of mechanism of implementation

<p>5. The provision of medicine to treat pain and Euphemism care centers in all primary care</p>	<p>1. The age of the policy of the provision of such drugs in the initial centers 2. Develop a mechanism for patients involved in the exchange 3. The age of the policy of the provision of such drugs in the initial centers 4. A mechanism of exchange of the concerned patients</p>	<p>1. And a ministerial decree to provide such drugs in the initial centers. 2. And a simplified guide to situations in which it conducts with the necessary medicines. 3. The availability of medicines in the same constant ratio to the required quality. 4. And a ministerial decree to provide such drugs in the initial centers. 5. And a simplified guide to situations in which it conducts with the necessary medicines. 6. The availability of medicines in the same constant ratio to the required quality.</p>
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Strategy 6	Mechanism of implementation	Indicators of mechanism of implementation
<p>6. The creation of an effective referral system between the three levels of care for cancer patients</p>	<p>1. Enactment of a clear policy for the referral system from primary care to secondary care and specialist 2. The preparation of a reference model from one level to another 3. A system model and feedback (Feedback system) from primary care to secondary care and specialist</p>	<p>1. And a guide explaining the details of the referral system at every level 2. And a model for referral 3. A system (unverified)</p>

Forth objective: Strengthening the means of surveillance, monitoring and evaluation program of cancer control.

Objective (4): Strengthening the means of surveillance, monitoring and evaluation program of cancer control.

Goal:

1. Development and continuous improvement of the national and the Gulf registry of cancer and ensure the timely availability of their reports.
2. The application of quality standards, monitoring and performance indicators
3. Provision of survival and stage data.

Goals indicators:

1. Activate the use of a comprehensive database able to provide the necessary data.
2. The application of quality standards and performance indicators and updated.

STRATEGIES

Strategy 1	Mechanism of implementation	Indicators of mechanism of implementation
1. The development of a comprehensive database to enable evaluation of the program cancers.	<ol style="list-style-type: none"> 1. Finding and applying information system to collect data for the statistical sections of each institution on all the indicators that contributes to the assessment of the implementation of this plan and in particular the use of computer 2. Develop a mechanism for checking to ensure the quality of information. 3. Analysis of survival rate of more common cancers 	<ol style="list-style-type: none"> 1. The proportion of indicators that can be obtained from data collected in the institutions routinely on patients. 2. The proportion of completion of registration. 3. The proportion of correct data. 4. Survival rate of the most common species in the league.

Strategy 2	Mechanism of implementation	Indicators of mechanism of implementation
2. annual assessment of the performance indicators for the fight against cancer	<ol style="list-style-type: none"> 1. Develop a mechanism for annual evaluation, conducts periodic 	<ol style="list-style-type: none"> 1. The ratio of performance indicators in the elements of care for cancer patients

Strategy 3	Mechanism of implementation	Indicators of mechanism of implementation
3. Comply with the standards of quality and performance indicators reflect the quality of the service	<ol style="list-style-type: none"> 1. Development of criteria and indicators of quality 	<ol style="list-style-type: none"> 1. The proportion of adherence to these standards

Fifth objective: conducting and strengthening the research and studies related to cancer.

Objective 5: conducting and strengthening the research and studies related to cancer.

Goal:

1. Find a health research to help planning and health assessment based on scientific evidence
2. Contribute to the creation of data to make the fight against cancer a priority for decision makers in the GCC countries

Goal Indicators:

1. The existence of the research mentioned health
2. Cancer research a priority for decision makers in the GCC countries.

STRATEGIES

Strategy 1	Mechanism of implementation	Indicators of mechanism of implementation
1. Research and epidemiological and clinical economics of cancer types of priority.	<ol style="list-style-type: none"> 1. The formation of a specialized research team 2. Identify the types of cancer a priority. 3. Monitoring the budget for the implementation of the study 4. A timetable for the preparation and implementation of approved studies. 	1. Number of studies ended.

Sixth objective: involve patients and their families to participate in the services provided and quality control.

Objective 6: involve patients and their families to participate in the services provided and quality control.

Goal:

1. Improve the behavioral pattern of living and general
2. Improve the quality and quality of life for people living with cancer.
3. The patient developed a major hub for the services provided

Goal Indicators:

4. Patient satisfaction with the quality of services provided

2. The extent of involvement of the patient and his family in the control treatment in order to improve the quality of life.
3. The impact of these programs to control the cancer and its complications.

Mechanisms of application strategies indicators mechanisms application

Strategy 1	Mechanism of implementation	Indicators of mechanism of implementation
1. The participation of cancer patients and their families in treatment and follow-up to the level of service delivery	<ol style="list-style-type: none"> 1. Implement educational programs individually and collectively, for patients and their families in the care of cancer patients. 2. The provision of home care service 3. The provision of home care handbook and Euphemism 	<ol style="list-style-type: none"> 1. The number of programs implemented 2. Number of patients involved. 3. Number of community care nurses. 4. Number of patients who are committed to implementing programs 5. Number of social workers.

Seventh objective: community partnership to control cancer

Objective 7: community partnership to control cancer.

Goal:

1. The participation of government institutions and civil responsibility on the national cancer control program.
2. Identification of partners in cancer control, and securing active collaboration with them.

Goal indicator:

1. Implementation of joint programs between the relevant authorities

STRATEGIES

Strategy 1	Mechanism of implementation	Indicators of mechanism of implementation
1. Include all the relevant community of the National Committee to combat cancer.	1. Issuance of a decision by the highest authorities of the competent representation of NGOs on the national committee. 2. Development programs and joint activities between the relevant agencies	1. The number of programs and activities within the partnership with community institutions.

