

# International Agency for Research on Cancer

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**Governing Council  
Fifty-third Session**

**GC/53/19  
06/05/2011**

*Lyon, 12–13 May 2011  
Auditorium*

## **ADMISSION OF A NEW PARTICIPATING STATE**

### **Turkey**

1. The Director has the honour to inform the Governing Council that the Government of Turkey has applied to be admitted as a Participating State in the International Agency for Research on Cancer. This application was communicated in a letter to the Director-General of the World Health Organization dated 25 April 2011, a copy of which is appended (Appendix 1). The Director-General transmitted this application to all Participating States by letter dated 2 May 2011 and informed them that it would be considered by the Governing Council in accordance with Rule 50 of the Rules of Procedure of the Governing Council. Note is taken of the date of delivery of the letter of application in relation to the time-limit stated in Rule 50.
2. The Governing Council Subcommittee on the Admission of new Participating States, in accordance with Resolution GC/16/R8, will meet on 12 May 2011 to consider this matter and to report to the Fifty-third Session of the Governing Council.
3. A report of the Turkish Government on cancer research in Turkey is also appended (Appendix 2).

Appendix 1



REPUBLIC OF TURKEY  
MINISTRY OF HEALTH

25 April 2011

Dear Director-General,

*On behalf of the Government of the Republic of Turkey, the Ministry of Health formally requests admission as a Participating State in the International Agency for Research on Cancer (IARC), with immediate effect.*

*As per the Articles III and XII of the Statutes of IARC, we are sending you our application for admission to the Agency, including a brief description of the cancer research and cancer control activities in Turkey, we would be grateful if these documents could be forwarded to the IARC Governing Council at your earliest convenience, as we realize that we have slightly exceeded the deadline of 10 February 2011, i.e. 90 days before the next Governing Council meeting (Lyon, 12-13 May 2011)*

*The Ministry of Health, on behalf of the Government of the Republic of Turkey, hereby undertakes to observe and apply the provisions established in the IARC Statute, Rules and Regulations, including to assume the financial commitment associated with being a Participating State of Agency, as assessed by the Governing Council.*

*The Ministry of Health, on behalf of the Government of the Republic of Turkey, awaits the processing of this application and is looking forward to becoming a Participating State of IARC as soon as possible and to contributing effectively to the scientific and technical work of the Agency. Our understanding is that, on admission, Turkey would have full voting rights as and from the first year of its participation.*

*Any further clarifications on this matter should be addressed to the Ministry of Health. The Ministry of Health also kindly informs you that a copy of this letter has been sent to Dr. Christopher P. Wild, Director of IARC*

*Please accept, Madam Director-General, the assurances of my highest consideration.*

Prof. Dr. Recep Akdag  
Minister

*Enclosure: Summary of Cancer Research and Control Activities in Turkey*

*Dr. Margaret Chan  
Director-General of the  
World Health Organization*

## Appendix 2

### **Turkish Cancer Control Activities**

#### **About Turkey**

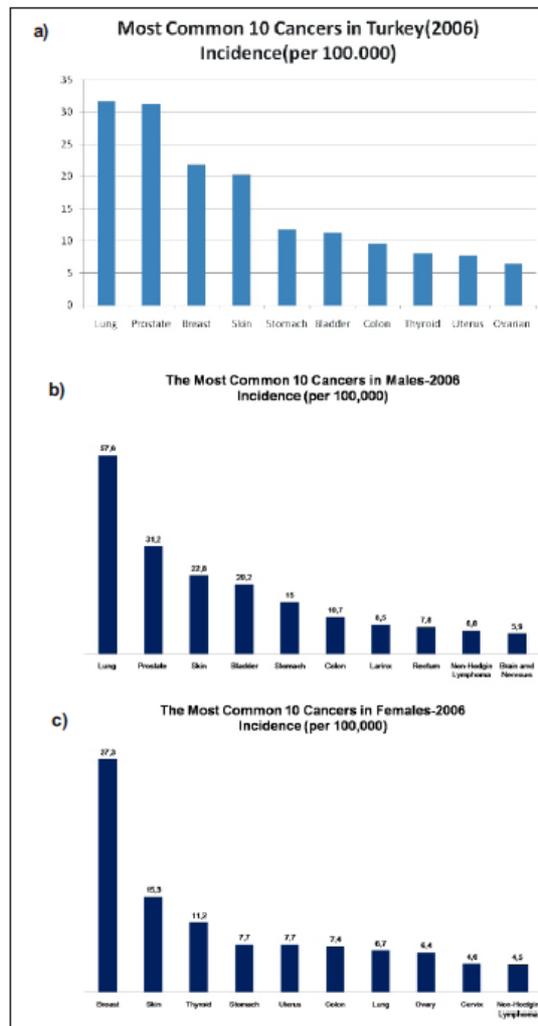
Turkey is a Eurasian country that bridges the Asian and European continents. It is bordered by eight countries, and has significant geostrategic importance. The population of Turkey is 71,517,100 with a growth rate of 1.31% per year, and predominantly urban (75% of population residing in urban areas), based on the 2008 Population Census. The five largest provinces of Turkey by population are Istanbul (17.8%), Ankara (6.4%), Izmir (5.3%), Bursa (3.5%) and Adana (2.8%). In Turkey, half the population is under the age of 28.5; the 0-14 age group corresponds to 26.3% of the total population, the 15-64 age group to 66.9%, while the 65 and over age group corresponds to just 6.8% of the population. Based on the figures from 2005, health expenditures represent 5.7% of the Gross Domestic Product (GDP), with 4.1% of the GDP spent on public health.

#### **Cancer burden in Turkey**

In recent years, cancer has become one of the most important public health problems in Turkey, as well as in the rest of the world. Cancer is the second highest cause of death in Turkey, after cardiovascular diseases. An estimated 100,000 new cases of cancer were diagnosed in Turkey annually (all cancers excluding non-melanoma skin cancer) [According to the data of The Ministry of Health of Turkey]. Cancer incidence is substantially higher in men than in women (incidence 256 and 158.1 per 100,000 respectively). Lung and prostate cancer are the most common cancers in men whilst in women the most common type is breast (Figure 1).

This pattern of cancer incidence places Turkey between developing and developed nations: the major cancer types reported in Turkey are broadly consistent with the pattern observed in more developed nations but it does not yet have the high incidence rates that are normally seen in these regions. This is at least in part due to the predominantly young population of Turkey. The exception is the incidence of lung cancer in men where Turkey ranks in the top 25 nations in the world and slightly above the incidence in Europe as a whole (ASR 49.1 and 48.9 per 100,000 respectively).

In view of the steady increase in cancer incidence rates observed in the last decade and of the changing population demographics, Turkey has accelerated its cancer control activities. It is estimated that if effective measures are not implemented, cancer related expenditures in Turkey will double by 2030 and 1.3 million people will be afflicted with cancer (Figure 1a and Figure 2).



**Figure 1** – Estimated incidence rates of the ten most common cancers in men and women in Turkey in 2006

**Panel Globally**

a)

Lung	Prostate	Breast	Skin	Stomach	Bladder	Colon	Thyroid	Uterus	Ovarian
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**Panel Males**

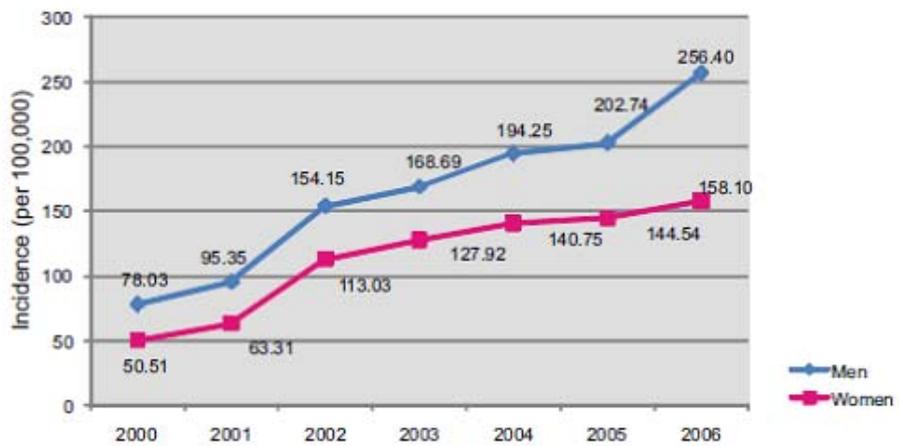
b)

Lung	Prostate	Skin	Bladder	Stomach	Colon	Larynx	Rectum	Non-Hodgkin Lymphoma	Brain and Nervous System
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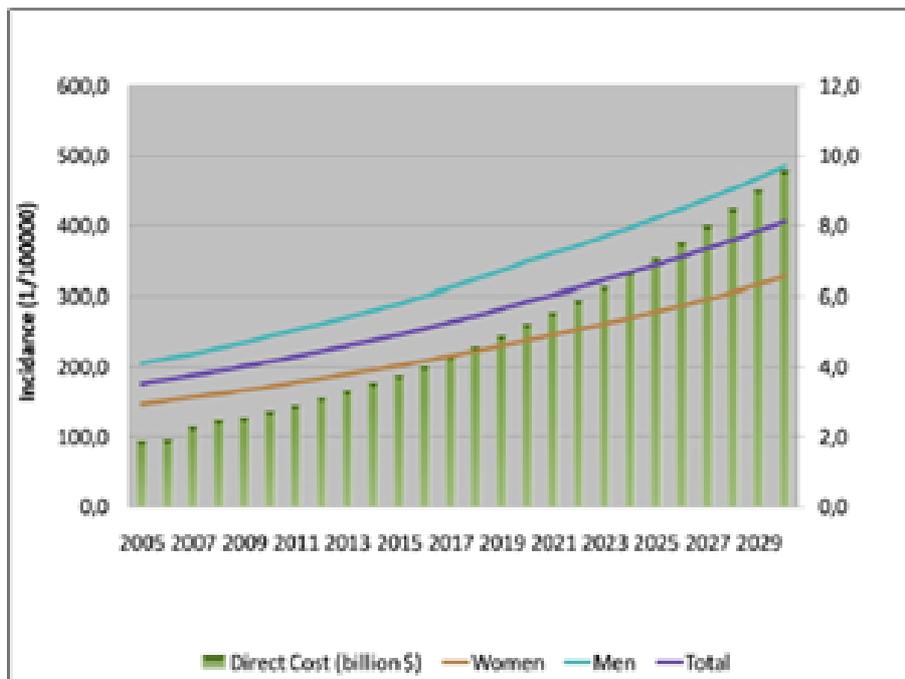
**Panel Females**

c)

Breast	Skin	Thyroid	Stomach	Uterus	Colon	Lung	Ovary	Cervix	Non-Hodgkin Lymphoma
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**Figure 1a** – Cancer incidence in Turkey from 2000-2006 (Incidence 100,000). An increase between 2000 and 2004 is related to improvements in cancer registries



**Figure 2** – Future projections of cancer incidence and direct cost expenditures for cancer

### Cancer Control in Turkey

Recognizing the importance of addressing the current impact of cancer in the health of the population, and the predicted rise in the burden of cancer in Turkey, the Ministry of Health has developed the National Cancer Control Program in cooperation with a number of international institutions and agencies including WHO (World Health Organization), IACR (International Association for Cancer Registry), UICC (International Union Against Cancer), NCI (National Cancer Institute) and MECC (Middle East Cancer Consortium).

The main targets of Turkey's National Cancer Control Program, which has now become state policy, are the accurate and regular registration of the cancer burden, reduction of the incidence of the main preventable cancers and the establishment of a cancer screening and training center in each province. Specific goals of the Program can be summarized as follows:

- To reduce tobacco consumption, to prevent new smokers, and to eliminate the passive exposure to tobacco smoke.
- To reduce infection-related cancer morbidity and mortality.
- To reduce the frequency of cancers due to environmental and occupational factors.
- To control obesity-, diet- and inactivity-related cancers.
- To establish a national organization structure for cancer.
- To establish a delivery chain structure for diagnosis, treatment and scientific research for cancer.
- To extend palliative care services throughout the country.

### **Main Cancer Registration Activities**

The availability of accurate statistical data on the rates of different cancers is essential in order to develop effective strategic plans for cancer prevention and control. Given the importance of collecting correct and reliable data on cancer incidence, Turkey has strongly supported the development of population based cancer registries. In addition to the 8 provincial centers currently operating, new centers are scheduled to open in the near future which will enable a more comprehensive and representative compilation of cancer incidence data. Since the population of these 8 centers represents almost 22% of the country's total population, current data is accepted as representing an accurate estimate of cancer incidence in Turkey. Reflecting the improvement in the quality of cancer registration, data provided by two of these centers has been accepted and for the first time included in the latest edition of IARC's "Cancer Incidences in Five Continents".

With regards to cancer mortality rates, data in Turkey is unfortunately not very reliable owing to disruptions in mortality records. Although we have mortality data from hospitals, we aim to be able to provide reliable data concerning cancer mortality from our cancer registry centers, as we do for medium and long-term cancer incidences.

### **Cancer Prevention**

The long-term goals of the National Cancer Control Program include a 15% decrease in smoking-related cancers and a 10% decrease in the incidence of all cancers, with a resulting decrease in cancer mortality.

Lung cancer is the most common and the most significant preventable cancer in Turkey. Effective tobacco control would result in the prevention of approximately 40,000 lung cancers per year in Turkey, together with reductions in the numbers of many other cancers (cancers of the larynx, urinary bladder, cervix, pharynx and oral cavity).

The Cancer Control Program of Turkey aims to reduce consumption of cigarettes and other tobacco products and increase the promotion of healthy nutrition through education. Turkey is one of the few countries which have implemented comprehensive tobacco control laws, banning smoking in all closed public areas since July 2009. In recognition of Turkey's lead in this area, Prime Minister Recep Erdoğan was awarded the 2010 WHO Special Recognition Award for Contribution to Global Tobacco Control.

Serious measures have also been taken to curb environmental cancers, often caused by arsenic, asbestos and erionite, which are prevalent in Turkey. Natural asbestos occurs in more than 80 settlements in our 61 provinces posing considerable threat to human life in some areas. An extensive program has been initiated in order to prevent erosion and the imprudent use of land.

### **Screening Programs**

In addition to the control of cancer through primary prevention, early diagnosis and reduction of cancer mortality are also among our major targets. Specifically, a national population based cancer screening program has been established in Turkey within the framework of the Ministry of Health and European Union MEDA (Mediterranean Development and Aid Programme) program. Currently, breast and cervical cancer screening services are provided free of charge to those individuals who do not possess the necessary financial means, through 122 Early Cancer Diagnosis Screening and Training Centers (KETEM) in 81 provinces throughout the country.

The centres aim to screen 35% of the target population in the short and medium term and at least 70% in the long term. National standards regarding breast, cervical and colorectal cancer screening have been approved. In forthcoming years, provision of screening of colorectal cancer will also be analyzed and coverage of the centers will be extended to all cities (at least one in each) to increase the infrastructural support.

### **Cancer Research in Turkey**

To date, cancer research in Turkey has been primarily focused on population-based studies of the influence of lifestyle and environmental risk factors on the occurrence of cancer. Other active areas of research are cancer surveillance, cancer screening and prevention. Below we present a brief list of the main recent and current studies in these areas.

#### **Environment and cancer**

- Ongoing international study of the effects of the radiation released by the accident at Chernobyl Nuclear Plant in 1986 on cancer in populations in the Black Sea region.
- Studies of the relationship between exposure to zeolite (inhalation of erionite) and Mesothelioma in central Anatolia
- Studies of the relationship between arsenic exposure in drinking water in the province of Kütahya and cancer.

#### **Screening and early detection**

- Cervical and Breast Cancer Screening Studies
  - Epidemiological studies
  - Screening implementation studies
- Early Warning, Recording, Monitoring, Analysis, and Education in Determining the incidence of the Sub-Groups of Human Papilloma Virus (HPV) - A study to determine the prevalence of HPV infection and of different HPV types in Turkish women is being performed using paraffin blocks and/or dissections obtained from pathology material.

- Early Diagnosis of Stomach Cancer - Pilot Project - planned screening of 15,000 healthy volunteers was started by the Ankara University, Faculty of Medicine in 2007. At the end of 2008, 4,610 participants had been examined by endoscopy. The study is continuing with the objective of reaching a population of 7,000.

#### Other

- Pharmaco-genomic Study of Stomach Cancer Genetics - Project with TÜBITAK Marmara Research Center Molecular Biology Unit to study the relationship between the cancer frequencies in different regions in Turkey and carcinogens found in drinking water sources.
- Identifying the Bio-indicators for Stomach Cancer and Development of Molecular Diagnosis Systems (MYKA) - Project of the Molecular Biology Unit of the TÜBITAK-Marmara Research Centre, together with a consortium of researchers from faculties of medicine of various universities and in Turkey.
- Defining Serologic and Epigenetic Indicators to be used in Treatment of Cancer, Early Diagnosis and Prognosis - A project being developed with the Bilkent University and submitted to TUBITAK-KAMAG (Public Research Group) program.
- Nutrition and Cancer, Questionnaire Study - A project with the Department of Nutrition and Dietetics of Baskent University to administer a questionnaire on nutritional factors possibly related to cancer in the population in the counties of Eskisehir and Ankara.

### **Turkey's National Cancer Institute**

The creation of the new National Cancer Institute (NCI) and the formalisation of the relationship with IARC represent an exceptional opportunity for the development of Turkey's cancer research. The new NCI will provide a focal point for the cancer research activities in Turkey and the opportunities for international collaboration with and through IARC. The collaboration between the two organizations will therefore play a leading role by bringing an international dimension to the country's emerging cancer research activity as described in some of the project-specific initiatives in the section above.

### **Turkey as an IARC Participating State**

As outlined above, cancer will be one of the leading causes of death in the near future in Turkey, in a similar way to other developing countries. Accordingly, the Ministry of Health has published a National Cancer Control Programme for 2009-2015. To improve the success of the programme, international collaboration, advice and assistance of experts is crucial.

Within this scope, the Cancer Control Department of the Turkish Ministry of Health is in collaboration with different international societies. Among them, IARC is of particular importance and becoming a Participating State is one of our strategic goals. IARC is a key organization in generating international data on cancer burden through support to cancer registries; coordinating epidemiological surveys of risk factor prevalence; comparing risk factors across different cultures and countries; conducting large scale trials of cancer prevention strategies and producing important publications for the literature. In addition, IARC provides training for cancer researchers, a vital requirement as Turkey seeks to develop its capacity for cancer control.

There are already collaborations between Turkish scientists and IARC. For example, there is cooperation with respect to cancer registration, including provision of technical support through the CANREG software. IARC has also evaluated the carcinogenicity of more than 900 agents and research into risk factors relevant to the Turkish population would offer excellent opportunities for collaboration. IARC also offers a platform to introduce Turkish cancer researchers to further collaborations, research, workshops etc. with different countries through its international profile.

The participation of Turkish scientists in courses and in post-doctoral training programs is vital for future developments.

Finally, Turkey is the leading country in the South East Europe and Middle East Region and with its growing economy it will be a good candidate to lead the surrounding regions for further collaborations in cancer research. This is a region where IARC currently has no Participating States and regional leadership is required to influence the cancer agenda of the Agency. Cancer can be eradicated only with good international collaborative projects and IARC represents one of the best opportunities for this purpose.

In conclusion, the Turkish Ministry of Health is eager to establish such a strategic partnership with IARC and to work for both national cancer problems and regional international cancer research by becoming a Participating State of IARC.