



# CANCER CARE IN TURKEY

## The State of Oncology in Turkey

*Gastric cancer is the second leading cause of cancer death in men and the third in women*

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The history of oncology in Turkey dates back to before World War II. In 1929, Dr. Hamdi Suat Aknar established the country's first cancer laboratory,<sup>1</sup> and in 1947, the Turkish Association for Cancer Research and Control was founded. Then, in 1972, Dr. Dinçer Fırat established the first medical oncology unit in Turkey.

Today, there are more than 400 medical oncologists and 400 radiation oncologists in Turkey. Although most cancer specialists are based in large cities such as Istanbul, Ankara, and Izmir, oncology services are available in other parts of the country.

The Ministry of Health has designated cancer as a "reportable disease"—meaning that all cancer diagnosis should be reported to the Ministry of Health—and 16 active cancer registration centers have sprung up in 15 cities (representing approximately 50% population coverage). The country set a goal to have active cancer registration centers in all 81 cities, with a 100% coverage rate, by the end of 2015.<sup>2</sup>

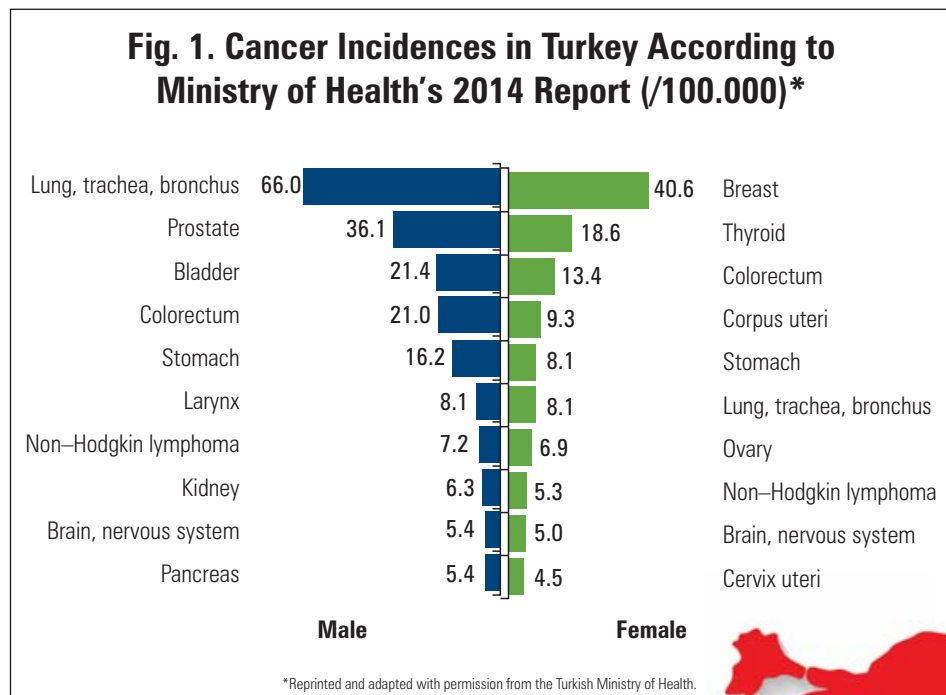
Turkey has a number of active cancer organizations, including the Turkish Association for Cancer Research and Control, the Turkish Oncology Group,

Most patients receive insurance coverage from the government. Cancer treatment is free for all Turkish patients with government insurance.

the Turkish Medical Oncology Society (TMOS), and the Anatolian Society of Medical Oncology. The National Cancer Institute of Turkey was recently established and will hopefully become active this year.

### National Trends

Active registration programs provide valuable data about the state of oncology in Turkey. We estimate that there are more than 100,000 patients newly



diagnosed with cancer each year.<sup>3</sup> Respiratory system cancers constitute almost one-third of all reported cancers in men. In women, breast cancer accounts for more than one-quarter of reported cancers, and colorectal cancer is the third most common cancer in women and the fourth in men. Gastric cancer is the fifth most common cancer in men in Turkey (Fig. 1), but it is the second leading cause of cancer death in men and the third in women.

### Regional Trends

In certain parts of the country, incidences of some cancers are higher than others. For example, in the Eastern Anatolia region, upper gastrointestinal tumors, such as esophageal squamous cell carcinomas, are endemic. According to 2014 Turkey Ministry of Health Cancer Statistics, the age-standardized incidence rate of colorectal cancer in Turkey is 21.0 in men and 13.4 in women per 100,000 people (Fig. 1).<sup>3</sup> The estimated number of new patients with colorectal cancer in both genders is 7,218 (4,102 male and 3,116 female).<sup>4</sup>

A multicenter, prospective, and cross-sectional registry study of data from 968 patients with colorectal cancer from 21 centers in seven geographic regions

in Turkey by Aykan N et al. showed that colon cancer is most common in the Marmara region, and rectal cancer is most common in Central Anatolia.<sup>5</sup> These interregional differences of relative percentage between colon and rectal cancer cases may be because of lifestyle factors. For example, in the Aykan N et al. study cohort, red meat consumption was high in the Marmara, Central, and Eastern Anatolia regions. Additionally, the percentage of patients who smoked was slightly higher, although not significantly so, in the rectal cancer group. The role of red meat consumption and smoking should be elucidated in future trials to understand interregional differences of risk factors.<sup>5</sup>

### Cancer Care and Prevention

#### Cancer care providers

Oncology training in Turkey is quite rigorous. After 6 years of medical school, radiation oncology residency takes approximately 5 years. By contrast, medical oncology fellowships begin after 4 years of internal medicine training and last for approximately 3 years. After completing medical school and training, students are required by Turkey's Ministry of Health to serve 2 years of compulsory service.

Turkey has few surgical oncologists, so general surgeons perform most cancer operations. Pathology departments work hard to handle the very large demand from clinicians, and some are in the process of improving their operations. In the Aykan N et al. study co-

hort, patients with colon cancer were diagnosed at a considerably later stage (35.9% of patients had stage III disease, and 29.7% of patients had stage IV disease at diagnosis), and most of the cases underwent surgery. Further, the majority of patients were referred to medical oncology clinics after receiving surgical treatment.<sup>5</sup>

#### Treatment

Cancer drugs are available in Turkey and can be prescribed once they have been approved by the government. Most patients receive insurance coverage from the government, and cancer treatment is free for all Turkish patients with government insurance.

#### Screening

Many health care institutions in Turkey provide tests and examinations to detect cancer early, and Cancer Early Diagnosis Screening and Training Centers (KETEMs) conduct community-based cancer screening programs. KETEMs increase the community's awareness of cancer through training to make early cancer diagnosis and screening more

widespread, eliminate preventable cancers, and decrease the mortality of screenable cancers. KETEMs provide free screenings in Turkey for cervical cancer

in women aged 30 to 65, for breast cancer in women aged 50 to 69, and for colorectal cancer in women and men aged 50 to 70.

#### ASCO Resources

Although cancer research is mostly



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based on translational studies, there are several regulatory, organizational, and procedural challenges to conducting clinical trials in Turkey. Therefore, ASCO and TMOS have organized an International Clinical Trials Workshop, to be held May 7-8, in Istanbul, to help early-career oncologists begin their research.

In 2006, it was my great pleasure to receive a Conquer Cancer Foundation of ASCO International Development and Education Award (IDEA). The IDEA program connected me with my mentor Philip Philip, MD, PhD, from Karmanos Cancer Institute, and my co-mentor Bassel El-Rayes, MD, from Emory University, and helped us create lasting and beneficial relationships. In September 2015, the three of us organized the ASCO-TMOS

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## ARTICLE HIGHLIGHTS

- Active registration programs provide valuable data about the state of oncology in Turkey. These data show that there are more than 100,000 patients in Turkey who are newly diagnosed with cancer each year.
- Many health care institutions in Turkey provide tests and examinations to detect cancer early, and Cancer Early Diagnosis and Screening Centers conduct community-based cancer screening programs.
- Most patients receive insurance coverage from the government, and cancer treatment is free for all Turkish patients with this insurance coverage.