Cancer Control in Turkey
Republic of Turkey

75 million citizens
81 cities
Population Change: 1923-2023

Kaynak: TÜİK 2010a, 2010b, 2010c
Life expectancy

Under-5 Mortality rate per 1000: 18
Maternal Mortality: 1975-2005

Şekil 27. Anne ölüm oranlarındaki değişimler, 1975-2005

<table>
<thead>
<tr>
<th>Health Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy</td>
<td></td>
</tr>
<tr>
<td>Female:</td>
<td>75.3 yrs</td>
</tr>
<tr>
<td>Male:</td>
<td>71 yrs</td>
</tr>
<tr>
<td>(2010 data)</td>
<td></td>
</tr>
<tr>
<td>Physicians per 1000 citizens:</td>
<td>1.5</td>
</tr>
<tr>
<td>Nurse per 1000 citizens:</td>
<td>1.3</td>
</tr>
<tr>
<td>Health Expenditure Per Capita:</td>
<td>671 €</td>
</tr>
<tr>
<td>Total Health Expenditure</td>
<td></td>
</tr>
<tr>
<td>(% of Gross Domestic Product - PPP):</td>
<td>6%</td>
</tr>
</tbody>
</table>
## Causes of Death in Turkey, 2009

<table>
<thead>
<tr>
<th>Category</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td>36.2</td>
<td>44.4</td>
<td>39.9</td>
</tr>
<tr>
<td>Cancer</td>
<td>24.4</td>
<td>16</td>
<td>20.7</td>
</tr>
<tr>
<td>Respiratory</td>
<td>10.1</td>
<td>7.4</td>
<td>8.9</td>
</tr>
<tr>
<td>Metabolic Diseases</td>
<td>4.8</td>
<td>8.3</td>
<td>6.4</td>
</tr>
<tr>
<td>Intoxication or Trauma</td>
<td>4.9</td>
<td>2.8</td>
<td>4.0</td>
</tr>
<tr>
<td>Other</td>
<td>19.6</td>
<td>21</td>
<td>20.2</td>
</tr>
</tbody>
</table>

### Cancer Death Rate in 2002 % 12
TURKEY: The health system

• Organization:
  – Primary health care:
    • Family practitioners
    • Public health centers
  – KETEMs
  – Secondary health care:
    • Public hospital
    • Private hospital
  – Tertiary health care
    • University
    • Special field hospitals (cancer, torax etc)
Main priorities: The health system

- implementation of family medicine (key priority)
- control of communicable diseases
- NCDs
- Mother and child health
- Coverage of health services
- the health gap between the sexes or in socioeconomic status
Turkish NCCP, 2012-2017

Registry
- Data
- Active and Passive Registry
- Quality of Data

Prevention
- National Tobacco, Obesity etc.
- Local

Screening
- Breast
- Cervical
- Colorectal

Treatment
- Treatment
- Palia-Turk
## Cancer Incidences in Turkey ( /100.000)

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>Incidence Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung, Tracka, Bronchus</td>
<td>69.2</td>
</tr>
<tr>
<td>Prostate</td>
<td>37.6</td>
</tr>
<tr>
<td>Bladder</td>
<td>21.7</td>
</tr>
<tr>
<td>Colo-Rectal</td>
<td>20.8</td>
</tr>
<tr>
<td>Gastric</td>
<td>18.0</td>
</tr>
<tr>
<td>Larinx</td>
<td>9.1</td>
</tr>
<tr>
<td>Non-Hodgkin Lymphoma</td>
<td>6.9</td>
</tr>
<tr>
<td>Brain, Nervous System</td>
<td>6.1</td>
</tr>
<tr>
<td>Pancreas</td>
<td>5.8</td>
</tr>
<tr>
<td>Kidney</td>
<td>3.9</td>
</tr>
<tr>
<td>Thyroid</td>
<td>0.8</td>
</tr>
<tr>
<td>Breast</td>
<td>16.2</td>
</tr>
<tr>
<td>Uterus, Cervix</td>
<td>0.0</td>
</tr>
<tr>
<td>Ovary</td>
<td>0.0</td>
</tr>
<tr>
<td>Uterus, Corpus</td>
<td>0.0</td>
</tr>
</tbody>
</table>

- **Man**
- **Women**
Cancer Early Diagnosis, Screening and Education Centres

11 Centres at 2002,

Increased up to 124 by 2012.

Future planning is 275 centers by the year 2015
Cancer Screening

National Standards with EU Suggestions

**Breast**
- **Self Breast Exam**
  >20 yrs, monthly
- **Clinical Breast Exam**
  >20 yrs, biannually
  >40 yrs annually
- **Mamography**
  50-69, biannually

**Cervical**
- **Cytology (Smear)**
  30-65 Yrs, per each 5 yrs
- **HPV Test**
  30-65 Yrs, per each 5-10 yrs

**Colorectal**
- **Fecal Occult Blood Test**
  50-69 yrs, biennially
- **Colonoscopy**
  50-69 yrs, per each 10 years
Cancer Screening

MAMOGRAFI
Cancer Screening

Yıllık Hedef

Smear
CRC Stages

Evre 1:
- Toplam Yıllık Teşhis: 3060; %25,5
- 50-69 Yaş arası Teşhis: 1287

Evre 2-4:
- Toplam Yıllık Teşhis: 8940; %74,5
- 50-69 Yaş arası Teşhis: 3782
Cervical Cancer Stages

Evre 0: 1239
Evre 1: 1101; %72.8
Evre 2-4: 412; %27.2

- Total Yearly Diagnosis
- 30-65 Year Age Range Diagnosis
Breast Cancer Stages

Evre 1
- Toplam Yıllık Teşhis: 5511; %43,6
- 50-69 Yaş Arası Teşhis: 2374

Evre 2-4
- Toplam Yıllık Teşhis: 7129; %56,4
- 50-69 Yaş Arası Teşhis: 3200
CRC Age Distribution

Kolorektal Kanser Yaş Grup Dağılımı (%)

- 30-39
- 40-49
- 50-59
- 60-69
- 70+

<table>
<thead>
<tr>
<th>Year</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
<th>70+</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>5</td>
<td>13</td>
<td>23</td>
<td>26</td>
<td>33</td>
</tr>
<tr>
<td>2006</td>
<td>4</td>
<td>11</td>
<td>22</td>
<td>27</td>
<td>36</td>
</tr>
<tr>
<td>2007</td>
<td>5</td>
<td>11</td>
<td>23</td>
<td>28</td>
<td>33</td>
</tr>
</tbody>
</table>
Breast Cancer Age Distribution

Meme Kanseri Yaş grup Dağılımı (%)
Cervical Cancer Age Distribution

Serviks Kanseri Yaş Grup Dağılımı (%)

- 2005:
  - 30-39: 15
  - 40-49: 22
  - 50-65: 38
  - 66+: 25

- 2006:
  - 30-39: 18
  - 40-49: 31
  - 50-65: 34
  - 66+: 17

- 2007:
  - 30-39: 24
  - 40-49: 36
  - 50-65: 35
  - 66+: 5
Cancer Screening

Turkey Coverage Rates

Breast: % 20
Cervical: % 15
Colorectal: % 30
Problems Seen in Phase I

• Manpower
  – Pathologists and radiologists

• Access to the services
  – Crowded population
  – Large Surface Area
  – Hard winters

• Turkish epidemiological data
  – Younger Age Population
  – Heterogeneous city populations and cultures
Cancer Screening Problems

- Cytology: 30-65, 15,682,439
- Mammography: 50-69, 5,947,736; 40-69, 10,668,318
- FOBT: 50-69, Female/Male, 11,681,513

Crowded

- Younger
  - 49:< 43%
  - 50-69: 41%
  - 70>: 41%

TÜİK, 2011
Cancer Screening

Good News Seen in Phase I

- Background fascilities are adequate
- Cancer rates are still low
- HPV prevelance is very low (3%)
Cancer Screening

Solutions and Plans

• General
  – Family Physicians performance based integration
  – Software integration
  – Quality Criteria integration
  – Mobile Devices (Mobile KETEMs)
  – Mass Media Awareness Campaign with Leadershipness

• Cancer Specific
  – Breast: Central Mamography Reporting Center
  – Cervical: HPV Tests
  – Colorectal Cancers: Monoclonal Card Tests
Solutions:
Family Physicians’ Involvement

Çankırı Pilot Study:
• With FPI coverage 78,6 %
• Without FPI coverage 61,4 %
Cancer Screening

Solutions and Plans

• General
  – Family Physicians performance based integration
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  – Quality Criteria integration
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  – Mass Media Awareness Campaign with Leadershipness

• Cancer Specific
  – Breast: Central Mamography Reporting Center
  – Cervical: HPV Tests
  – Colorectal Cancers: Monoclonal Card Tests
Solutions: Mobile Unit Involvement

Çankırı Pilot Study:
• With MUI coverage 82.5 %

İzmir Pilot Study:
• With MUI coverage 87 %

Erzurum Piloting... (35 MMG per day)
Cancer Screening

Solutions and Plans

• General
  – Family Physicians performance based integration
  – Software integration
  – Quality Criteria integration
  – Mobile Devices (Mobile KETEMs)
  – Mass Media Awareness Campaign with Leadershipness

• Cancer Specific
  – Breast: Central Mamography Reporting Center
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Central Report Center and Mobile Devices