Ministry of Health, Deputy of Public Health
Center for Non-communicable Disease Control, Cancer Office
INPCR secretariat

Introduction to

Iranian National Population-based Cancer Registry (INPCR)

Dr Gholamreza Roshandel, MD, PhD
Director, INPCR

History of INPCR

- 1340s
 - Cancer registry activities in Iran

- 1360s
 - National Pathology-based cancer registry
 - Limitation: underestimation

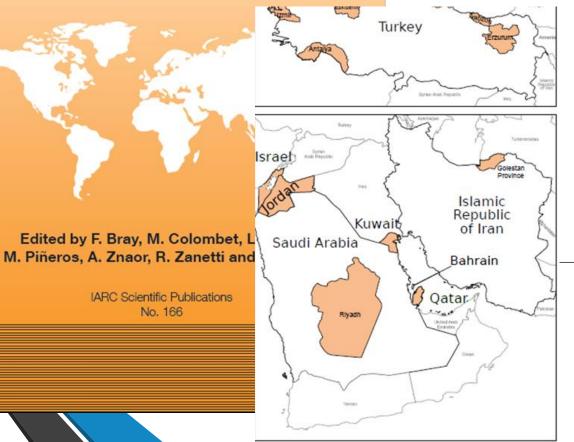
- 1380s
 - Regional Population-based Cancer Registries (PBCRs)
 - Ardabil and Golestan PBCRs were accepted as voting members of the IACR
 - Publication of Golestan PBCR data in CI5 (Volumes X and XI)

Publication of the GPCR data in the CI5_XI



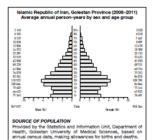
Cancer Incidence in Five Continents Vol. XI

No. 166



Islamic Republic of Iran, Golestan Province

CONTRIBUTORS Gholamreza Roshandel Shahryar Semnani Alireza Sadjadi Mohammadreza Honarva Seyed Mehdi Sedaghat Vahideh Kazeminejad Abbas Moghaddami Honeveh Sadat Mirkarim



| Male | | Female | |
|-----------------------------|-------|-----------------------------|-------|
| Stomach | 25.5 | Breast | 30.5 |
| Oesophagus | 22.3 | Oesophagus | 16.2 |
| Trachea, bronchus, and lung | 15.1 | Stomach | 12.3 |
| Prostate | 11.8 | Colon | 9.3 |
| Non-melanoma skin cancer | 11.5 | Trachea, bronchus, and lung | 6.5 |
| Colon | 11.3 | Non-melanoma skin cancer | 6.1 |
| Bladder | 9.9 | Ovary | 6.0 |
| Brain and nervous system | 6.6 | Other and unspecified | 5.5 |
| Non-Hodgkin lymphoma | 6.6 | Brain and nervous system | 5.3 |
| Other and unspecified | 6.1 | Cervix uteri | 5.2 |
| Larynx | 5.3 | Non-Hodgkin lymphoma | 3.2 |
| Lymphoid leukaemia | 4.8 | Rectum | 3.1 |
| Rectum | 4.5 | Bladder | 2.9 |
| Liver | 3.9 | Thyroid | 2.8 |
| Pancreas | 3.2 | Lymphoid leukaemia | 2.6 |
| Myeloid leukaemia | 2.9 | Liver | 2.5 |
| Kidney | 2.8 | Leukaemia unspecified | 2.3 |
| Multiple myeloma | 2.8 | Pancreas | 2.2 |
| Leukaemia unspecified | 2.1 | Multiple myeloma | 2.2 |
| Testis | 1.7 | Myeloid leukaemia | 2.1 |
| All sites | 175.5 | All sites | 146.4 |

History of cancer registration in Iran

- 1380s (cont'd)
 - Regional PBCRs in other provinces
 - Great infrastructures (human resources, software, guidelines)
- The major limitations of these regional PBCRs included:
 - Lack of organizational structures
 - Poor access to financial support
 - Possible discrepancies in operational plans and methods of data collection
- Therefore, in early 1390s, the MOHME planned to establish an integrated Iranian national population-based cancer registry (INPCR).

Planning for National PBCR

Main requirement for establishment and maintenance of the INPCR: Comprehensive collaboration between major stakeholders

To ensure **effective and permanent collaborations**:

INPCR agreement

• Signed by Deputy Ministers of <u>Health</u>, <u>Research</u> and <u>Treatment</u>

Approved by the Minister of Health

(September 2016)



- تبصره ۳- در استان هایی که بیش از یک دانشگاه دارند، تصمیم گیری درباره فرآیند دسترسی و استفاده از دادههای یکبارچه استانی به عهده «کمیته مشترک ثبت سرطان استان» خواهد شود.
- تیصره ۴- اجرایی شدن این تفاهمانامه مستلزم بررسی و تصویب آن توسط کمیته ملی پیشگیری و کنترل بیماریهای غیر واگیر است.
 - تبصره ۵- مكاتبات با رونوشت به هر سه طرف تفاهم،نامه صورت مى پذيرد.
- تبصره ۶- تغییر در مقاد این تفاهم،نامه با موافقت هر سه طرف تفاهم،نامه و پس از تأیید در کمیته ملی سرطان و کمیته ملی پیشگیری و کشرل بیماریهای غیر واگیر ایجاد خواهد شد.

این تفاههامه در ۱۲ ماده، ۱۶ بند و ۱۳ تبصره در دو نسخه تنظیم شده که هر دو نسخه حکم واحد دارند.





1850

تفاهمنامه برنامه ملی ثبت سرطان در ایران

شهریور ماه ۱۳۹۵

صفحه ۱ از ۲

سمه تعالى

غاره ۱۳۹۵/۰۷/۲۶ بایخ ۱۳۹۵/۰۷/۲۶ پیت داده

والعادمة المالعال المالية

﴿ ﴾ جِنُورِي ﴿ النَّا وَارت بِهارْت رِدَانَ الوَرْبُ وَتَوْفِ

رئیس/سرپرست محترم دانشگاه/دانشگده علوم پزشکی و خدمات بهداشتی، درمانی

بالامواقها

به پیوست تفاههانمه مشترک فیمایین معاونتهای تحقیقات و فن آوری، بهداشت و درمان در خصوص «برنامه ملی ثبت سرطان در ایران» که به تأیید مقام محترم وزارت نیز رسیده است، جهت اطلاع و اجرا، ابلاغ می شود.

> (م) دکتر حسین کشاورز باور وزیر و مدیر کل حوزه وزارتی

> > نوشت:

- ✓ جناب أقاى دكتر ملكزاده معاون محترم تحقيقات و فن أورى

 - ✓ جناب آقای دکتر لاریجانی معاون محترم آموزشی

5

دكتر محمد حاجي آقاجاني

صفحه ۱۷ از ۷

INPCR agreement:The main aims of the INPCR

- To help and motivate all medical universities to establish high-quality population-based cancer registries (regional registries) on their own population
- To support and supervise regional cancer registries to ensure maintenance of their activities
- To receive and aggregate cancer data from regional registries to produce and publish cancer statistics at national level

Organization of the INPCR

• Iran consists of 31 provinces and there are more than 60 medical universities



• The INPCR includes a <u>national-level secretariat</u> (the INPCR secretariat) and <u>university-level secretariats</u>

• The <u>INPCR secretariat</u> is located in cancer office of the MOH



The first step of the INPCR activity: Development of INPCR guideline (December 2016)



معاونت بهداشت، مركز بدوربت ببهار بهاي غيرها كير، اداره سرطان دبيرخانه برفامه ملى ثبت سرطان مبتنى بر جمعيت ايران

دستورالعمل اجرایی برنامه ملی ثبت سرطان ایران

نسخه 95.01

(آذر ماه ۱۳۹۵)

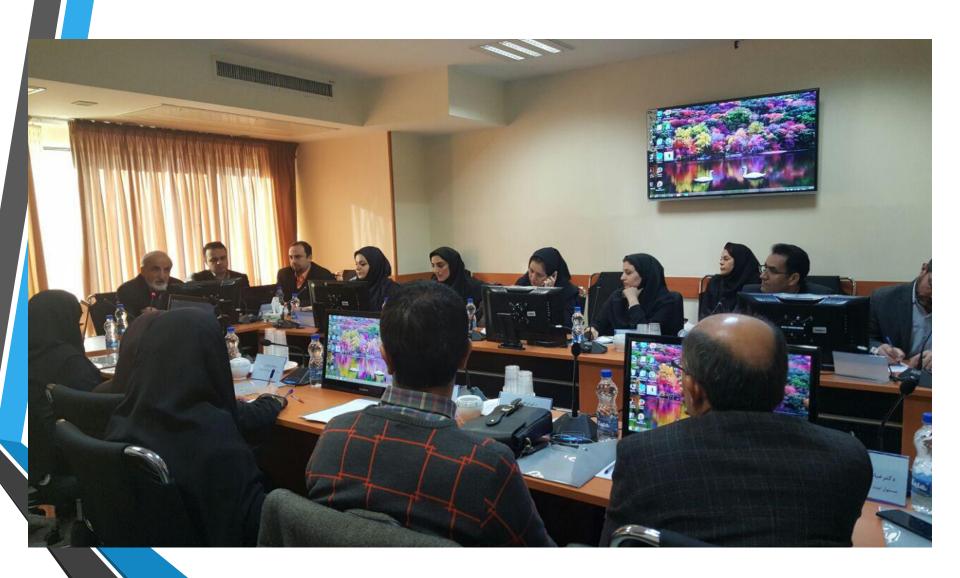
• To ensure comparability of data

 Considering IARC and IACR protocols and rules

To define mandatory and optional items

ICD-O coding

Training programs (Early 2017)



اولین همایش

INPCR

برنامه ملی ثبت سرطان ایران

1st Iranian National Population-based Cancer Registry Conference











- دبير خانه برنامه ملي ثبيت سرطان ايران
- دبیر خانه برنامه ثبت سرطان دانشگاه علوم پزشکی کلستان

باهمكاري:

- *معاونت بهداشت معاونت تحقیقات و فی آوری و معاونت درمان وزارت بهداشت درمان و آموزش پزشکی
 - *اداره سرطان معاونت ببداشت وزارت ببداشت درمان و آموزش پزشکی
 - *مديريت آمار و فناوري اطلاعات وزارت بيداشت درمان و آموزش بزشكي
- معاونت های پیداشت. نوسعه مدیریت و منابع آموزش درمان و تحقیقات و فن آوری داشتگاه علوم پزشکی کلستان
 - مرکز تجنیفات کوارش و کید داشگاه علوم پزشکی کلستان
 - *مدیریت آمار و فناوری اطلاعات دانشگاه علوم پزشکی کلستان
 - پژوهشکده بیماریای گوارش و کبد دانشگاه علوم پزشکی تبران
 - مرکز تحقیقات سرطان دانشگاه علوم بزشکی شهید بهشتی





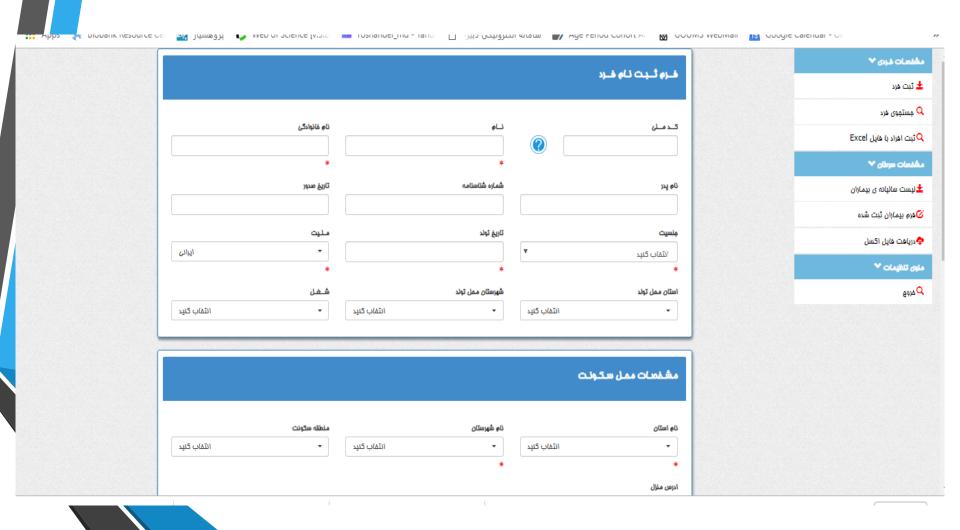
Collection of data (June 2017)

• Starting year: <u>2014</u>

• Main sources:

- 1. Pathology labs
- 2. Hospitals (from hospital medical records)
- 3. Death Registry Programs

INPCR online data collection tool: [Sima-ye-Saratan]



INPCR online data collection tool: [Sima-ye-Saratan]

A specific web-based application for data collection

• Advantages:

- Online tool for data collection
- To facilitate and secure transmission of data from the university cancer registry secretariats to the INPCR secretariat
- To facilitate data processing (especially, person search, checking for duplicate records at national level,...)

Quality control

Regional (University) level

National level

Quality control

Comparability

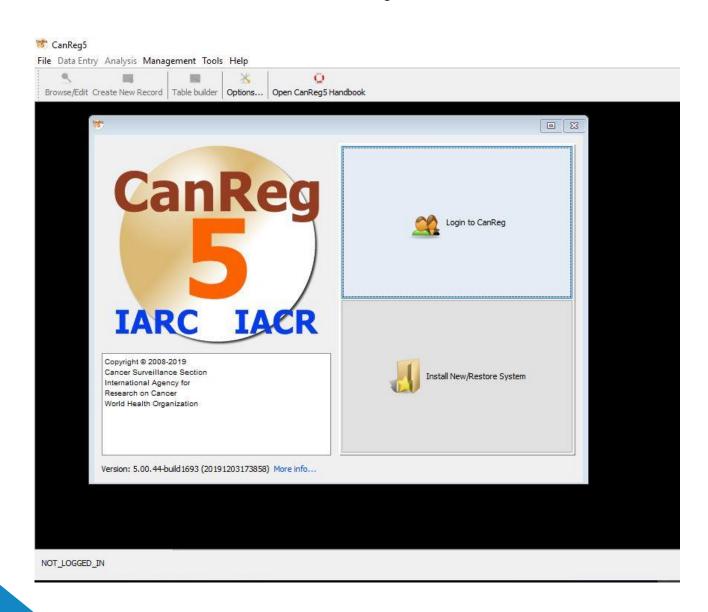
- Validity (or accuracy)
 - Internal consistency methods (consistency checks)

(IARC-check program)

Missing/incorrect information analyses

- Completeness
 - The proportion of cases microscopically verified (MV%);
 - Death certificate Only (DCO%)

INPCR Quality control



Indices of data Quality-1: Distribution of diagnosis methods in INPCR

| Year | Death Certificate Only (DCO) method | Clinical/ paraclinical methods | Microscopic Verification (MV) | |
|------|-------------------------------------|--------------------------------------|-------------------------------------|--|
| 2014 | <u>12.99 %</u> | 18.73 <u>%</u> | <u>68.28 %</u> | |
| 2015 | <u>12.60 %</u> | 12.80 <u>%</u> | <u>74.59 %</u> | |
| 2016 | <u>10.27 %</u> | 11.75 <u>%</u> | <u>77.98 %</u> | |
| 2017 | <u>10.84 %</u> | 13.66 <u>%</u> | <u>75.50 %</u> | |
| 2018 | <u>10.38 %</u> | 12.27 % | <u>77.35 %</u> | |

Indices of data Quality-2: Numbers and proportions (%) of cases with unknown primary site in INPCR, 2014-2018

| | 20 | 14 | 202 | 15 | 20 | 16 | 20 | 17 | 20 | 18 |
|--------|-------|-------------|-------|-------------|-------|------|-------|-------------|-------|------|
| | N | % | N | % | N | % | N | % | N | % |
| Male | 3,420 | 5.66 | 3,161 | 5.30 | 3,226 | 4.91 | 3,207 | 4.58 | 3,399 | 4.67 |
| Female | 2,889 | 5.59 | 2,682 | 5.14 | 2,771 | 4.74 | 2,729 | 4.20 | 2,718 | 3.93 |
| All | 6,309 | <u>5.63</u> | 5,843 | <u>5.23</u> | 5,997 | 4.83 | 5,936 | <u>4.40</u> | 6,117 | 4.31 |

INPCR progress report

| Year | Data Collection | Quality Control | Data Analysis | Report |
|------|--------------------|--------------------|------------------|----------|
| 2014 | Complete | Complete | Complete | Complete |
| 2015 | Complete | Complete | Complete | Complete |
| 2016 | Complete | Complete | Complete | Complete |
| 2017 | Complete | Complete | Complete | Complete |
| 2018 | Complete | Complete | Complete | Complete |
| 2019 | Complete | In progress | To-Do | To-Do |
| 2020 | In progress | To-Do | To-Do | To-Do |
| 2021 | In progress | To-Do | To-Do | To-Do |
| 2022 | In progress | To-Do | To-Do | To-Do |

INPCR annual reports

website: cancer.behdasht.gov.ir





Contents lists available at ScienceDirect

Cancer Epidemiology





Cancer incidence in Iran in 2014: Results of the Iranian National Populationbased Cancer Registry



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- * Torbateheidarish Gancer Registry, Torbateheidarish University of Mediaal Sciences, Torbate-heidarish, Iran
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- "Khoraum-North Canaer Registry, Khoraum-North University of Medical Sciences, Bojnard, Iran
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https://doi.org/10.1016/j.canep.2019.05.009

INPCR design paper

(Cancer Epidemiology, 2019)

[Using the data of the year 2014]

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CANCER EPIDEMIOLOGY



Cancer in Iran 2008 to 2025: Recent incidence trends and short-term predictions of the future burden

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|--|
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| ⁹ Cancer Surveillance Branch, International Agency for Research on Cancer (IARC), World Health Organization (WHO), Lyon, France |

Abbreviations: ASIs, age standard and incidencements; Soin & CKS, brain and other parts of central nervous system; IC, enophageal concer; IAQL interestional Association of Cencer Begintries; ASIC, bits medicinal Appendix Research on Cencer; ICQ-O-3, trind edition of the interestional Cencer Coloring; NIN, in terms National Psychologic NIN, in the National Psych

N.L. J. Cancer. 2021;1-12. Wileyonlinelibrary.com/journel/ljc 0:2021 Union for

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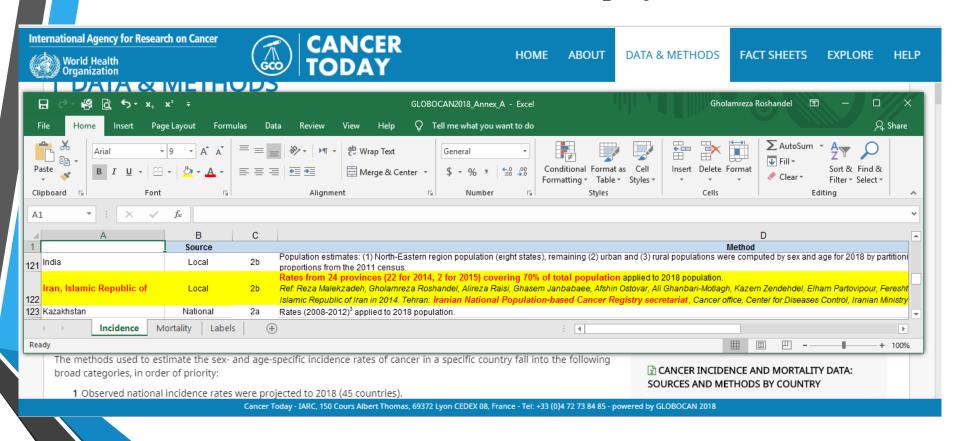
INPCR prediction paper

(International Journal of Cancer, 2021)

[Using the data of the years 2014-2016]

International collaboration

- Voting member of the IACR/IARC
- Collaboration in the Globocan2018 project



https://gco.iarc.fr/today/data-sources-methods

Use of the data



معاونت بهداشت، مرکز مدیریت بیماریهای غیرواگیر، اداره سرطان دییرخانه برنامه ملی ثبت سرطان میتنی بر جمعیت ایران

دستورالعمل دسترسی و استفاده از داده های برنامه ملی ثبت سرطان جمعیتی ایران

مهر ماه ۱۳۹۷

- Guideline for use of the INPCR data
- Signed by deputy ministers of <u>Health</u>, <u>Research</u> and <u>Treatment</u> (November 2018)
- Clear plan for access to and using the INPCR data
 - Regional (university/provincial level) data
 - National level data
 - Considering codes of research ethics and publication ethics

DTA

website: cancer.behdasht.gov.ir

Data requests (by January, 2023)

- 31 research projects:
 - Mainly student thesis (PhD, MSc, MD)

- From different Universities:
 - Tehran, Shahid Beheshti, Iran, Isfahan, Shiraz, Kerman, Yazd, Golestan, Hamedan, Urmia, Azad

Acknowledgments



For more information:

Website: cancer.behdasht.gov.ir

Email: cancer@health.gov.ir

Thanks for your kind attention