



IACR



**East Azerbaijan Population Based Cancer Registry
2015- 2017
(1394-1395 Solar Years)**



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Competing interests

The authors have no conflicts of interest.

ABBREVIATIONS

EA-PBCR: East Azerbaijan Population Based Cancer Registry

ASR: Age-Standardized Incidence Rate

CR: Crude Incidence Rate

MV: Microscopic Verification

CLIN: Clinical

DCO: Death Certificate only

CDC: Center for Disease Control

ICD-O3-: International Classification of Diseases for Oncology Third Edition code

WHO: World Health Organization

IARC: International Agency for Research on Cancer

IACR: International Association for Cancer Registry

NID: National Identification number

CI: Confidence Interval

HIS: Health Information System

LIS: Lab Information System

Introduction

The pattern of mortality has changed dramatically in developing and low-income countries over the last century due to the control of infectious diseases, the development of efficient treatment facilities for these diseases and the increased longevity in many countries. Chronic diseases, particularly cancer, are the most challenging health problem in the public health system around the world and cause heavy economic and psychological burdens and lead to death and infertility. According to the latest report by the Center for Disease Control and Prevention (CDC), cancer is currently the second leading cause of death in the United States. Cancer is the second leading cause of death according to latest systematic analysis for the Global Burden of Disease Study. In 2015, there were 17.5 million cancer cases worldwide and 8.7 million deaths. Between 2005 and 2015, cancer cases increased by 33%, with population aging contributing 16%, population growth 13%, and changes in age-specific rates contributing 41%. According to the latest report by the American Cancer Society (ACS), the five major causes of death due to cancer in 2016 were liver, breast, pancreas, colorectal and lung cancer, in respective order.

According to recent statistics provided by the Iranian Ministry of Health and Medical Education, cancer is the third leading cause of death after cardiovascular diseases and accidents in Iran. Since cancer is the third leading cause of death in Iran, its mortality has been rising over the past few decades, and population-based control, assessment and prevention programs are therefore necessary to reduce this rate.

The first step in controlling the burden of cancer is the collection of comprehensive population-based data on the epidemiology, incidence, type and location of cancer, which is best possible within the framework of population-based cancer registries. This information shall be provided to general health professionals to monitor the trend of the progression of cancer over time, to determine the patterns of cancer in different communities, guide the planning and evaluation of cancer control programs and help determine the priorities for allocating health resources for clinical, epidemiologic and research development. The National Cancer Control Program in Iran has various components, including the prevention, early diagnosis, diagnosis and treatment of various cancers and the provision of palliative care to all patients. Cancer registration is the most important part of the cancer control program, and in addition to helping identify the priorities and assess the effectiveness of cancer control programs, the data it provides has wide applications in epidemiological and clinical cancer research.

Population-based cancer registration is a five-year plan in the cancer control program, and its first phase covers 11 provinces, including East Azerbaijan, Ardabil, Tehran, Khuzestan, Kermanshah, Isfahan, Fars, Kerman, Golestan, Hormozgan and Markazi.

East Azerbaijan is the largest and most populous province in the northwest of Iran. It borders the Republics of Azerbaijan and Armenia from the north, West Azerbaijan Province from the west and southwest, Ardabil Province from the east and Zanjan Province from the southeast. East Azerbaijan Province has a cold mountain weather and is entirely spanned by mountains and heights. The province covers an area of 47,830 km², accounting for 2.8% of the total area of Iran as the 11th largest province in the country. The province is located in the northwest of Iran on 36° and 45° to 39° and 26° northern latitude and 45° and 5° to 48° and 22° meridian of eastern longitude.

Based on a general population and housing census in 2016, East Azerbaijan Province had a population of about 3,909,652, accounting for nearly %5 of the total population of Iran. Accordingly, 1,989,400 men and 1,920,252 women lived in the 1,223,028 households of the province.

In the 2016 census, Tabriz was considered the most populated city in East Azerbaijan Province with a population of 1,773,033, and Charuymaq was the least populated with a population of 31,071. Marand, Maragheh and Mianeh are other populous cities of the province aside from the provincial capital. The province has 2731 villages, including 20 vacant villages.

Details of the East Azerbaijan Province population-based cancer registry

A: Cancer registration and its processes

The main target of this program was to collect high-quality population-based data on cancer patients in East Azerbaijan Province in a systematic and continuous manner.

Specific Objectives

1. Determining the standardized incidence rate of cancers in the entire East Azerbaijan Province
2. Determining the time trend of cancer incidence in the province
3. Determining the survival rate of common cancers in the province
4. Determining the known risk factors of common cancers in the province
5. Using registered cancer data for research projects approved by the Research Center of the University (approved by the Ethics Committee)

Figure1. National Program for PBCR in Iran
(60% of the population)



Applied Objectives

1. Creating the necessary infrastructure for the establishment of a population-based cancer registration system in East Azerbaijan Province
2. Improving the provision of health and education services to patients and target groups of cancer registration in the province
3. Networking and promoting collaborations between experts and the basic research groups involved

B. History and background

Cancer registration based on pathologic reports in East Azerbaijan Province started 20 years ago in Tabriz City Health Center, which cover up to %68 of the new cases of cancer according to the latest report by the Center for the Management of Non-Communicable Diseases of the Health Deputy.

The first population-based cancer registration program for East Azerbaijan Province was carried out by Dr. Mohammad Hossein Somi et al. in 2007 at the Liver and Gastrointestinal Diseases Research Center of Tabriz University of Medical Sciences. Over one year, 4922 new cases were recorded, including 2798 male and 2085 female cases. The age-standardized incidence rate for all cancers was reported as 164.3 in men and 130.6 in women. The five most common cancers in men and their age-standardized incidence rates were gastric (%26.0), skin (%24.4), bladder (%15.7), esophageal (%12.4) and colorectal (%11.6) cancers; in women, they included breast (%23.5), skin (%14.7), esophageal (%11.7), gastric (%11.6) and colorectal (%9.7) cancers (2).

C. The structure of cancer registration

The population-based cancer registration program for East Azerbaijan Province went into operation in March 2016 as per the set goals and responsibilities and with the direct order of the president of Tabriz University of Medical Sciences. The purpose was to collect and record population-based data on patients with cancer.

Cancer Registration Process

Cancer Registration Steps

Phase one (first year)

Starting cancer registration by collecting the minimum information items needed

Making contact with the data collection sources

Fostering collaboration and determining a method for data collection

Preliminary report preparation

Phase two (second year)

Determining the quality of cancer registration

Determining the drawbacks and trying to remove them

Preparing a report containing the quality indicators (process indicators and outcome indicators)

The program methodology was based on the operational program of the National Cancer Registry of the Ministry of Health and Medical Education. The cancer registration software (can.reg) was installed at this center with the aim of recording all the data of patients with cancer and connecting to the Electronic Health Record (EHR) system of the treatment deputy. The registered data were population-based and included all the following information:

- A) Pathobiology centers
- B) Hospital medical records (the HIS)
- C) Province mortality data
- D) Outpatient department of the hospital
- E) Hematology-oncology centers
- F) Radiotherapy centers
- G) Imaging centers (public and private)
- H) Public and private clinics and health centers

These resources included 60 private and public pathology laboratories, 24 public and private hospitals, two radiotherapy centers and 37 CT scan and MRI imaging centers.

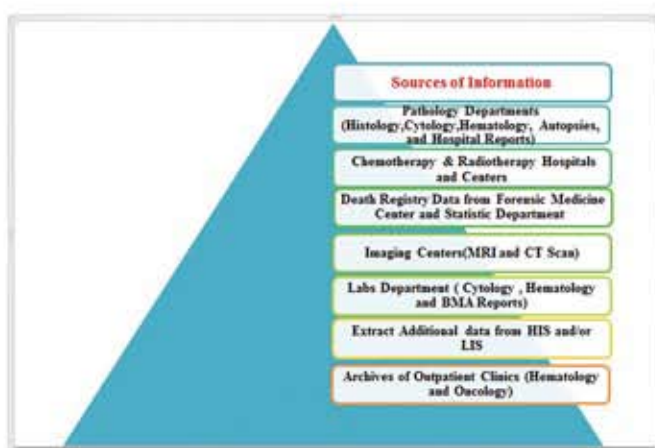


Figure 2. Data Collection Flowchart for East Azerbaijan Population Based Cancer Registry

Data collection methods

Active: The required cancer registry information is collected from information sources by the cancer registration personnel (visit and information collection and copying)

Inactive: The cancer registry office receives the information through:

- Forms
- Copies of the hospital discharge summary
- Reports

The process of collecting and recording provincial data was according to the following algorithm.



Figure3. Algorithm of Cancer Registry Process of EAPBCR

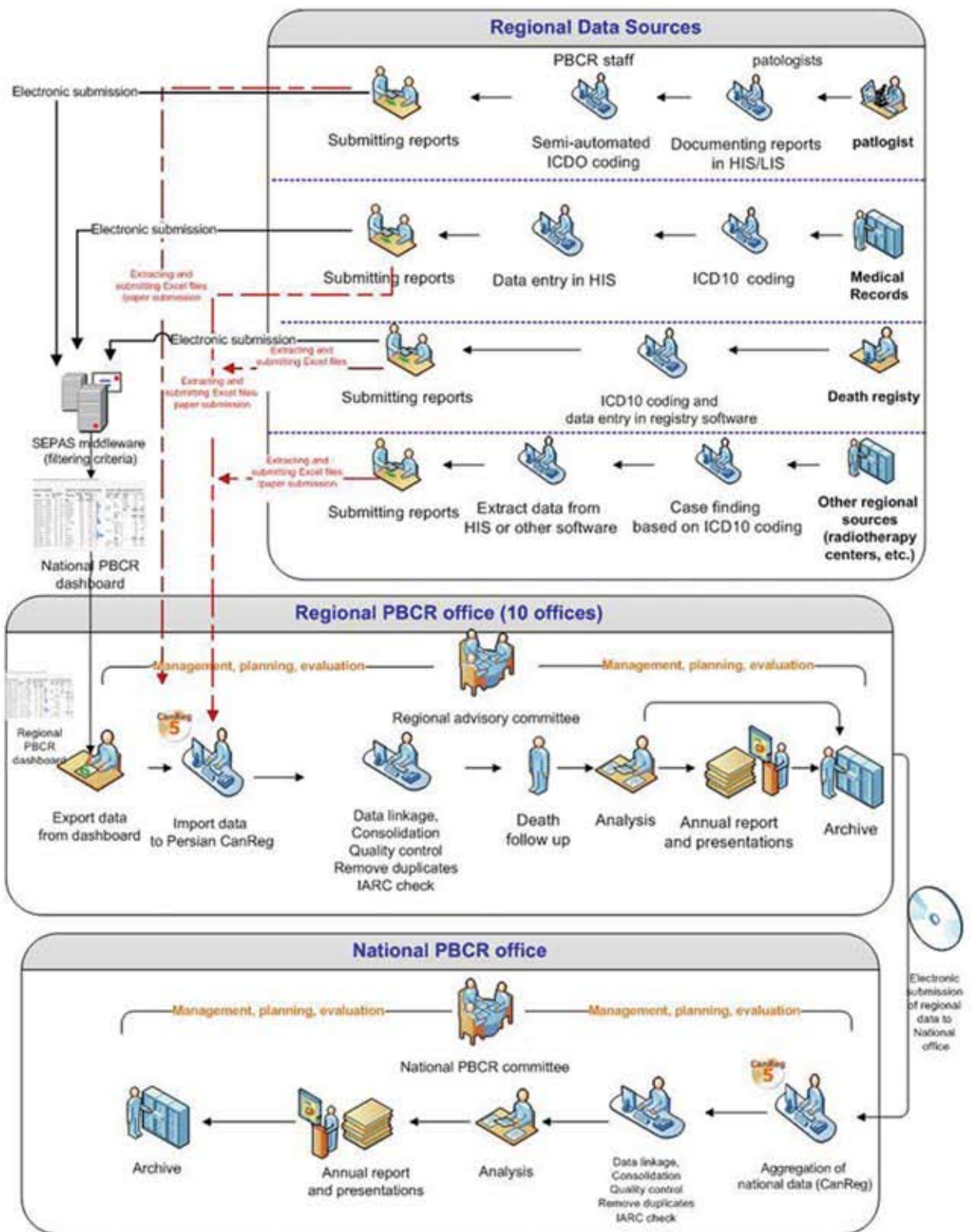


Figure4. Algorithm of data sources and import data in EAPBCR

The software used for the population-based cancer registration program in East Azerbaijan Province

The software used in this program was CanReg5, which is an open source tool for the input, storage, checking and analysis of cancer data. The Persian version of this software is based on the cancer patient's birth date in the Solar Hijri calendar and the mandatory input of their national ID and has formerly been approved by the International Agency for Research on Cancer (IARC). The current version of the program has multiuser capacity and the patients' information is recorded in three tables with greater detail and accuracy. These three tables include the patient's information, their tumor information and the data source.



Figure 5. CanReg5 software

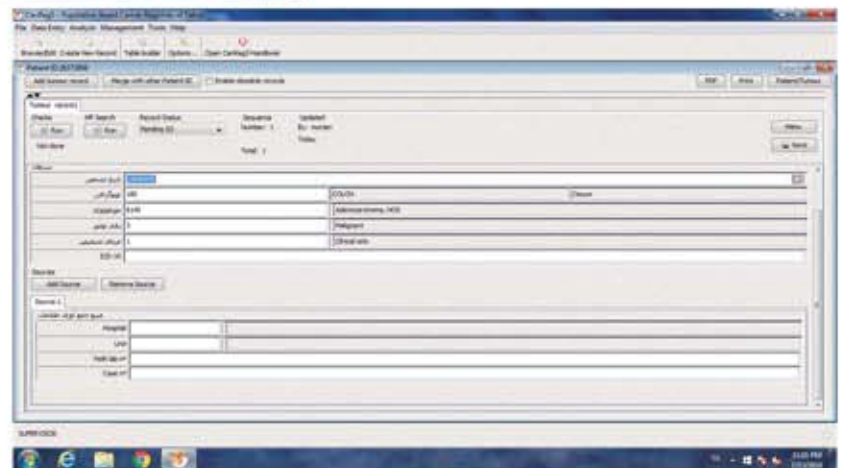
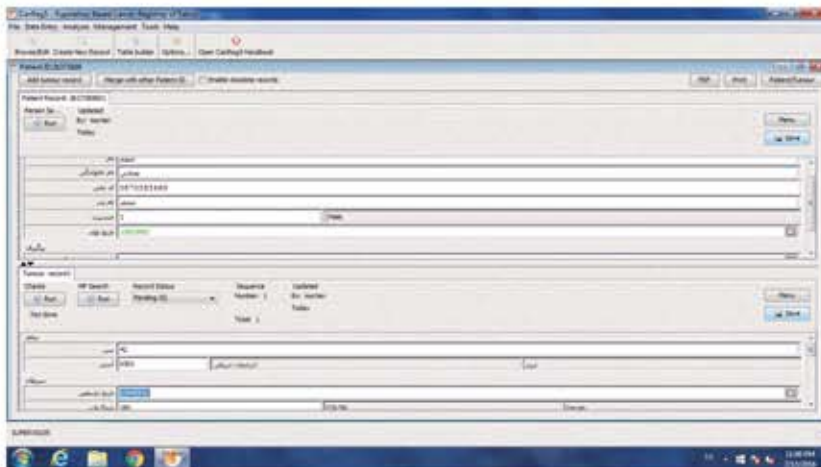


Figure 6. Cancer Registry Process in CanReg5

The program database structure

The minimum data required for the national population-based cancer registration

- Identity data
- National ID (mandatory)
- First name, last name, father's name (mandatory)
- Gender (mandatory)
- Birth date (mandatory)
- Place of birth, i.e. province/city (mandatory)
- Place of residence, i.e. province/city (mandatory)
- Phone number
- Service provider data (pathologist and assistant pathologist)
- First name, last name and Medical Council Code of the pathologist
- First name, last name and Medical Council Code of the assistant pathologist
- Sampling data
- Data on sample acceptance (mandatory)
- Pathological diagnosis data
- Disease group according to the ICD10- classification
- Morphology code according to the ICD-O3- coding system (mandatory)
- Topographical code according to the ICD-O3- coding system (mandatory)
- Pathology report date (mandatory)
- Tumor Stage
- Tumor Grade

Coding and classification system

The classification and coding of diseases began in 1893 with the efforts of the WHO for forming the International Statistical Classification of Diseases, Injuries and Causes of Death (ICD) as the only reliable and accessible instrument for the classification of diseases. Since ICD-O (International Classification of Diseases for Oncology) was first published in 1976, it has been internationally recognized as the definitive classification of neoplasm.

It is used by cancer registries throughout the world to record incidence of malignancy and survival rates, and the data produced are used to inform cancer control, research activity, treatment planning and health economics.

The classification of neoplasms used in ICD-O links closely to the definitions of neoplasms used in the WHO/IARC Classification of Tumours series which are compiled by consensus groups of international experts and, as such, the classification is underpinned by the highest level of scientific evidence and opinion.

ICD-O consists of two axes (or coding systems), which together describe the tumour:

- the topographical code, which describes the anatomical site of origin (or organ system) of the tumour, and
- the morphological code, which describes the cell type (or histology) of the tumour, together with the behaviour (malignant or benign).

The third edition of ICD-O (ICD-O3-) has been available in printed format since 2000. In September 2011, following approval by the WHO/IARC Committee for ICD-O3-, the classification was updated with a number of new or modified codes and terms (ICD-O3- First Revision, or ICD-O3.1-). The printed version of the first revision was published in 2013 and is available from WHO press (3).

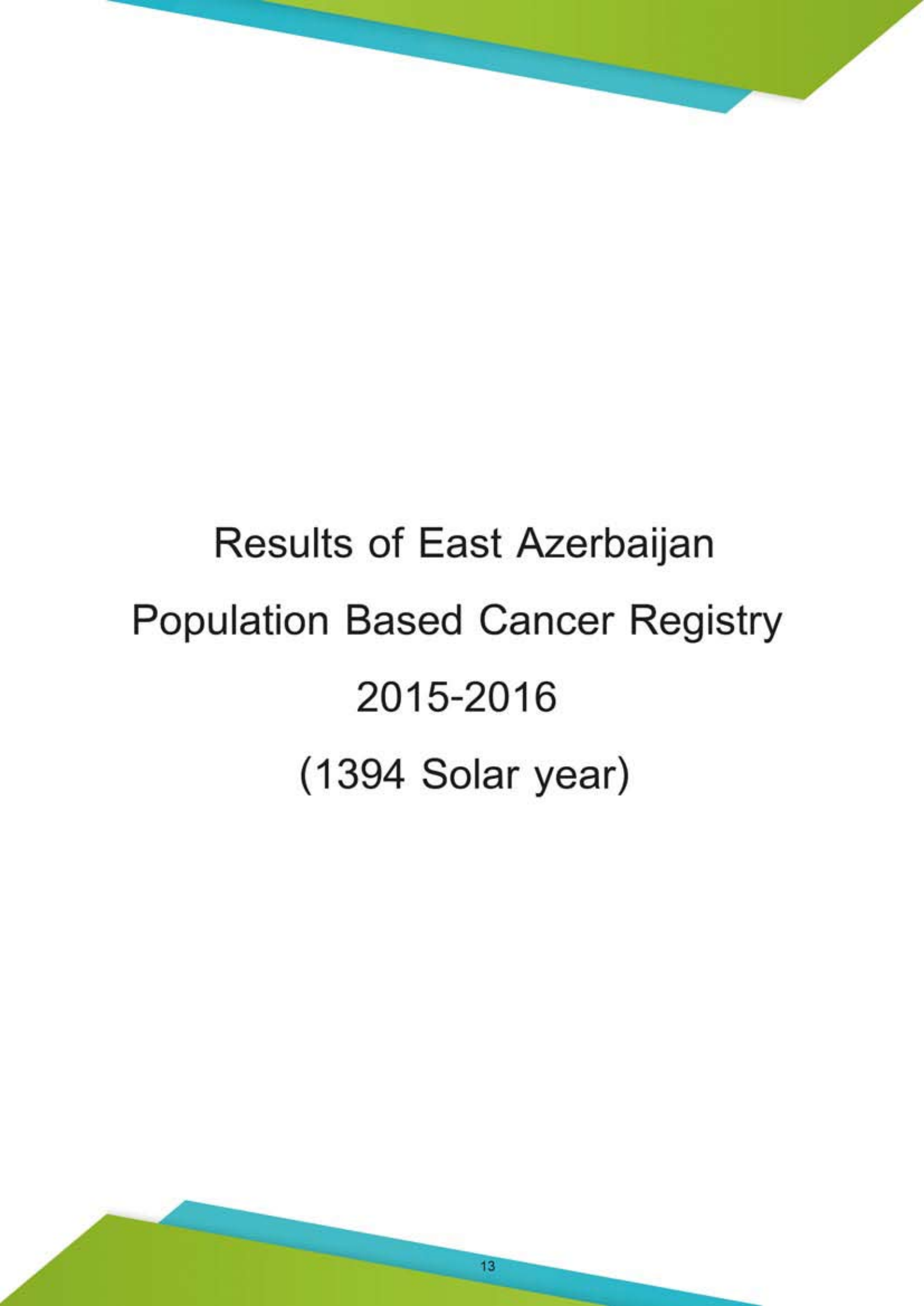
The coding system used for the population-based cancer registration program/center of East Azerbaijan Province is based on the latest version of the International Classification of Diseases for Oncology (ICD-O3-). Each tumor is a single entity, which means that each patient can have more than one tumor simultaneously or at different times; however, each tumor can have several reports. The specifications of each tumor (ICD-O M) and its morphological code (ICD-O C) include the date of the first report and the topographical code.

Table 1. Topography codes in ICD-O-III

Num	Topography code	Organ	Num	Topography code	Organ
1	74	ADRENAL GLAND	36	47	NERVES
2	21	ANUS	37	72	NERVOUS SYSTEM
3	24	BILE TRACT	38	76	NOS
4	67	BLADDER	39	10	OROPHARYNX
5	42	BLOOD	40	56	OVARY
6	40	BONES - LIMBS	41	25	PANCREAS
7	41	BONES - SKULL	42	65	PELVIS
8	71	BRAIN	43	60	PENIS
9	50	BREAST	44	48	PERITONEUM
10	34	BRONCHUS	45	14	PHARYNX
11	53	CERVIX	46	58	PLACENTA
12	18	COLON	47	61	PROSTATE
13	30	EAR/NOSE	48	19	RECTOSIGMOID
14	15	ESOPHAGUS	49	20	RECTUM
15	69	EYE	50	39	RESPIRATORY TRACT
16	57	FEMALE GEN.- OTHER	51	12	SINUS
17	23	GALL BLADDER	52	31	SINUS
18	26	GASTROINTESTINAL	53	44	SKIN
19	75	GLANDS - OTHER	54	17	SMALL INTESTINE
20	32	GLOTTIS	55	49	SOFT TISSUES
21	3	GUM	56	16	STOMACH
22	38	HEART	57	62	TESTIS
23	13	HYPOPHARYNX	58	37	THYMUS
24	64	KIDNEY	59	73	THYROID
25	0	LIP	60	1	TONGUE - BASE
26	22	LIVER	61	2	TONGUE - OTHER
27	77	LYMPH NODES	62	9	TONSILS
28	63	MALE GEN.- OTHER	63	33	TRACHEA
29	70	MENINGES	64	80	UNKNOWN
30	4	MOUTH - FLOOR	65	66	URETER
31	8	MOUTH - GLANDS	66	68	URETHRA
32	6	MOUTH - OTHER	67	54	UTERI
33	5	MOUTH - PALATE	68	55	UTERUS
34	7	MOUTH - PAROTID	69	52	VAGINA
35	11	NASOPHARYNX	70	51	VULVA

Table2. Population Distribution of East Azerbaijan Cities

City	Total	Male	Female	Household
State	3,909,652	1,989,400	1,920,252	1,223,028
Ahar	154,530	77,756	76,774	46,202
Tabriz	1,773,033	897,157	875,876	563,660
Sarab	125,341	64,578	60,763	38,446
Marageh	262,604	133,740	128,864	80,261
Marand	244,971	124,646	120,325	75,711
Miyaneh	182,848	94,355	88,493	57,665
Hashtroud	57,199	29,608	27,591	17,173
Bonab	134,892	68,457	66,435	42,325
Bostanabad	94,769	49,047	45,722	27,647
Shabestar	135,421	68,050	67,371	43,982
Kaleibar	46,125	23,545	22,580	14,145
Heris	69,093	34,722	34,371	20,639
Jolfa	61,358	31,562	29,796	19,443
Malekan	111,319	57,666	53,653	33,598
Azarshahr	110,311	56,028	54,283	35,364
Oskou	158,270	80,561	77,709	50,674
Chareimag	31,071	15,982	15,089	9,016
Varzegan	52,650	27,001	25,649	16,273
Ajabshir	70,852	38,188	32,664	20,608
Khodaafarin	32,995	16,751	16,244	10,196

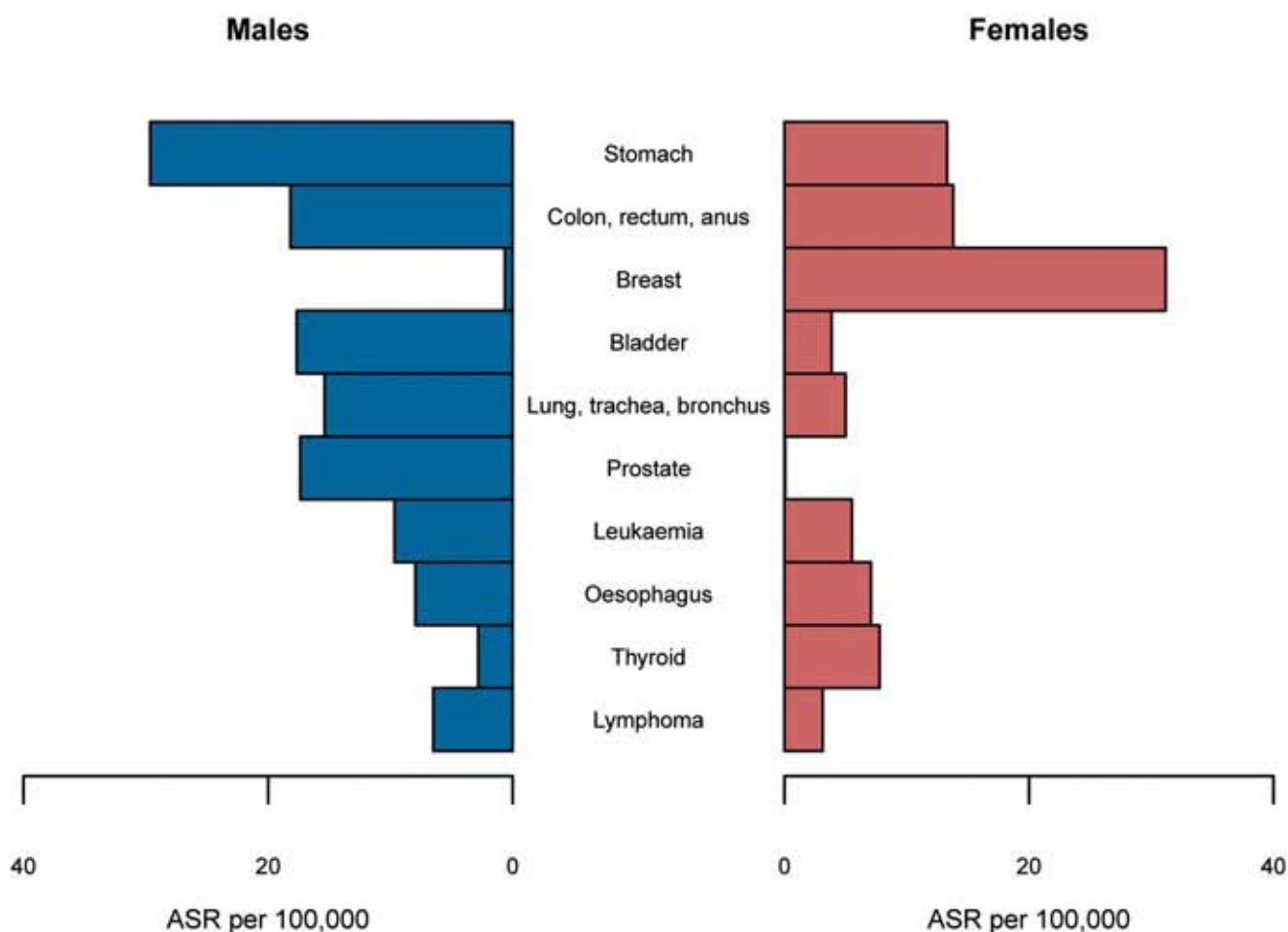


Results of East Azerbaijan
Population Based Cancer Registry
2015-2016
(1394 Solar year)

Study Sample

Figure 8 shows the process and role of different data sources in the EA-PBCR. We merged 3954 reports from pathology departments with 4416 reports from the medical records of hospital departments and 3166 reports from the cause of death registry ($n=11536$ cases). After removing 3044 duplicates and 629 records for patients who were referred from neighboring provinces, we linked the data to the 13,248 cases in the last three years pathology-based cancer registry, which led to the removal of an additional 1616 duplicate records. Also we included additional 408 cases during follow-ups who were referred to other cities. Finally, we obtained 6655 incident cases for inclusion in the statistical analyses.

Figure 7.
Tabriz Cancer Registry (1394)
Top Cancers (ASR)



Cancer Incidence

Of the 6655 new cancer cases in one Iranian solar year (March 20th, 2015, and March 19th, 2016), males accounted for 56.02 % (3728) and females accounted for 43.9% (2927) and male to female ratio was 1.27. The overall mean age was 60.97 (± 17.21) years, but was 63.68 (± 16.68) years for men and 57.53 ± 17.27 years for women. Except non-melanoma skin cancer (ICD-O3- code C44) the crude incidence rates per 100,000 were 175.2 for men and 141.0 for women. The ASR per 100,000 for all cancers was 167.1 for men, and 125.7 for women. The five most common cancers were stomach (ASR 29.7), colorectal (ASR 18.2), bladder (ASR 17.6), prostate (ASR 17.3), and lung (ASR 15.4) for men and breast (ASR 31.1), colorectal (ASR 13.7), stomach (ASR 13.3), thyroid (ASR 7.8), and esophageal (ASR 7.1) in women, respectively.

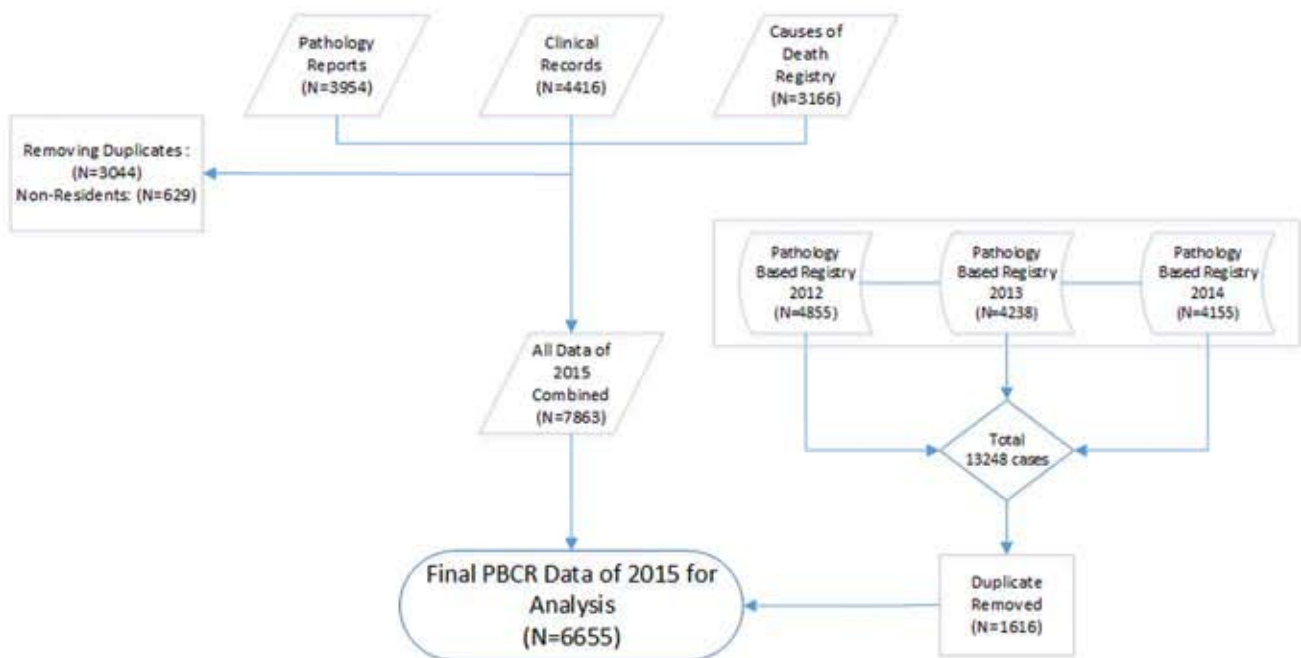
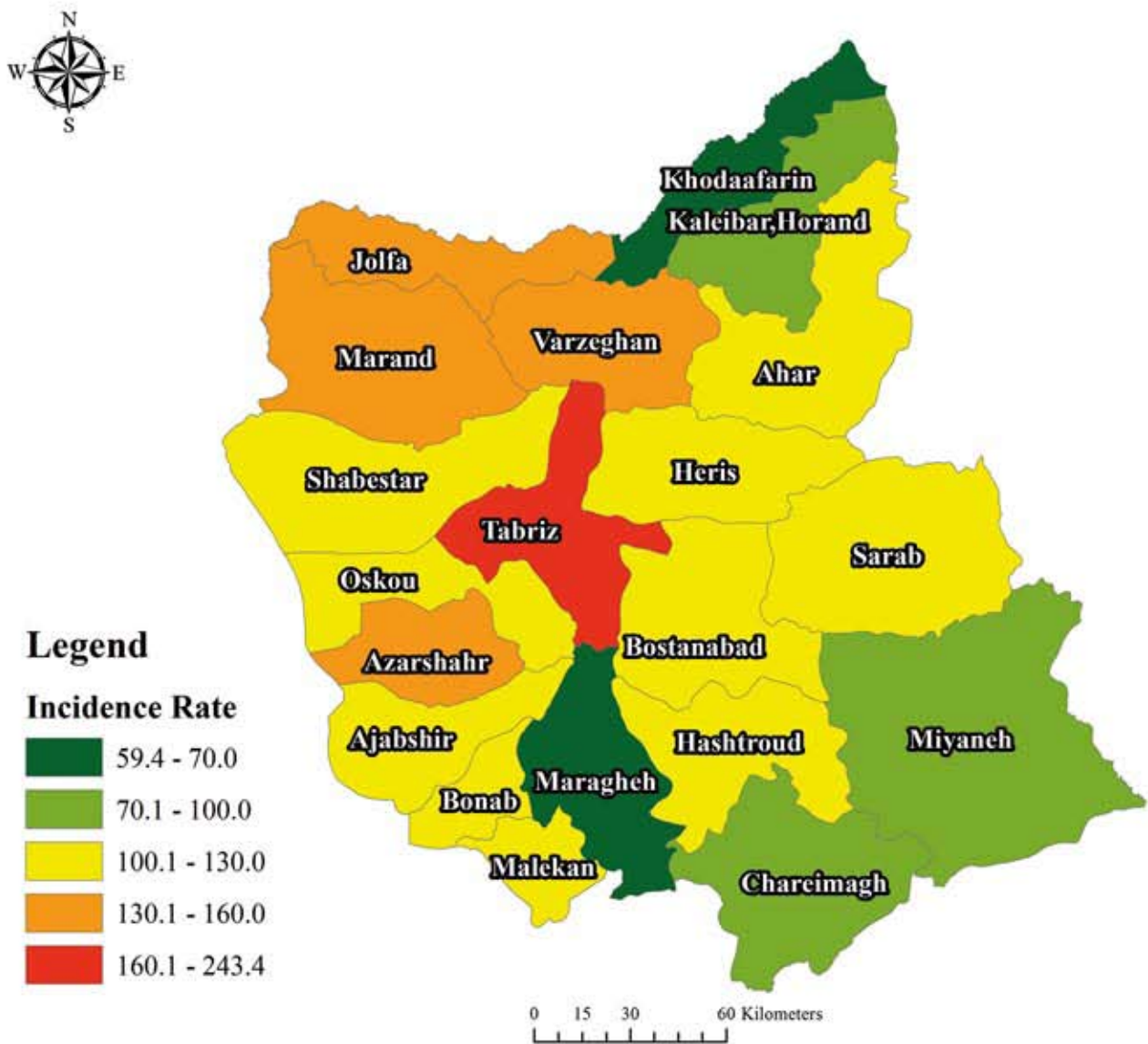


Figure 8. Data linkage and removal of duplicates and Non-residents in East Azerbaijan Population-Based Cancer Registry(1394)

Table 3. Number and Crude Incidence Rates of cancers according to cities of EAPBCR in 1394

City	Frequency	Percent	Population	Crude Incidence Rate
Ahar	220	3.3	202771	108.50
Tabriz	4272	64.0	1756158	243.43
Sarab	149	2.2	137243	108.57
Maragheh	153	2.3	257682	59.38
Marand	384	5.8	248920	154.27
Miyaneh	184	2.8	192590	95.54
Hashtroud	72	1.1	63176	113.97
Bonab	154	2.3	135875	113.34
Bostanabad	104	1.6	99839	104.17
Shabestar	147	2.2	128125	114.73
Kaleibar, Horand	48	.7	50423	95.19
Heris	85	1.3	71091	119.57
Jolfa	86	1.3	57012	150.85
Malekan	136	2.0	111237	122.26
Azarshahr	165	2.5	111085	148.53
Oskou	106	1.6	101133	104.81
Chareimagh	24	.4	34262	70.048
Varzeghan	64	1.0	47356	135.15
Ajabshir	78	1.2	69327	112.51
Khodaafarin	24	.4	35973	66.72
Total	6655	100.0	3911278	170.23

Figure9. Crude Incidence Rates of all cancer in East Azerbaijan cities (1394)



Data Quality

After rigorous attempts, %65.1 of the cases had microscopic verification, including histology (%63.2) and cytology (%1.9) results. The lowest microscopic verification rates were observed for liver cancers (%46.15 in men, %29.27 in women) and lung cancers (%54.66 in men, and 47.46 in women), and the highest rates were observed for testicular cancer (%93.75), male melanoma (%88.89), and oral cavity cancers (%85.05) .

Furthermore, we collected %15.2 of reports based on clinical data, including medical records (%14) and imaging reports (%1.2). The remaining data were collected from the cause of death registry or autopsy records, producing a final DCO% of %19.5. The highest DCO% was observed for female lung cancer (%48.31), but the DCO% was zero for melanoma and testicular cancer. Although the initial data had a higher DCO%, this decreased from %35 to %19.09 after linkage with different databases, contacting relatives to remove cases diagnosed in previous years, and clarifying the clinical and histological information for %15 of the DCO cases.

Table 4. ASRs for the top ten major cancers in males and females in East Azerbaijan Province in 2015-2016

Male					Female				
Site (ICD-O-3) ¹	No. of Cases	Proportion (%)	CIR ²	ASR ³	Site (ICD-O-3)	No. of Cases	Proportion (%)	CIR	ASR
Stomach (C16)	610	17.8	31.1	29.7	Breast (C50)	681	24.8	34.9	31.1
Colorectal (C18-21)	366	10.7	18.7	18.2	Colorectal (C18-21)	299	10.8	15.4	13.7
Bladder (C67)	356	10.4	18.2	17.6	Stomach (C16)	302	11.0	15.5	13.3
Prostate (C61)	369	10.7	18.8	17.3	Thyroid (C73)	175	6.4	9.0	7.8
Lung (C33-34)	320	9.3	16.3	15.4	Esophagus (C15)	157	5.7	8.0	7.1
Leukemia (C91-95)	196	5.7	10	9.6	Leukemia (C91-95)	117	4.2	6	5.5
Esophagus (C15)	172	5.0	8.8	8.0	Lung (C33-34)	117	4.3	6.0	5.0
Lymphoma (C81-85,88,90,96)	126	3.7	6.4	6.4	Ovary (C56)	97	3.5	5.0	4.8
Liver (C22)	115	3.3	5.9	5.9	Bladder (C67)	87	3.2	4.5	3.9
Brain& CNS (C70-72)	111	3.2	5.7	5.3	Liver (C22)	82	3.0	4.2	3.5

¹ International Classification of Diseases for Oncology Third Edition code

² Crude Incidence Rate

³ Age-standardized Incidence Rate

Table 5.
Tabriz Cancer Registry (1394)
 Data Quality Indicators

MALE

SITE	Cases	% Total	ASR(se)	MV(%)	CLIN(%)	DCO(%)	ICD10
Mouth & pharynx	110	2.97	5.40 (0.54)	85.45	6.36	8.18	C00-14
Oesophagus	172	4.65	7.95 (0.65)	64.53	9.88	25.58	C15
Stomach	609	16.45	29.65 (1.29)	62.40	8.54	29.06	C16
Colon, rectum, anus	366	9.89	18.17 (1.01)	72.13	12.02	15.85	C18-21
Liver	116	3.13	5.92 (0.58)	43.97	6.03	50.00	C22
Pancreas	64	1.73	3.22 (0.43)	56.25	9.38	34.38	C25
Larynx	83	2.24	4.24 (0.49)	79.52	6.02	14.46	C32
Lung, trachea, bronchus	320	8.64	15.38 (0.92)	54.38	4.06	41.56	C33-34
Pleura & other thoracic	31	0.84	1.47 (0.27)	67.74	25.81	6.45	C37-38
Melanoma of skin	8	0.22	0.36 (0.13)	87.50	12.50	0.00	C43
Prostate	370	9.99	17.37 (0.98)	62.97	14.86	22.16	C61
Testis	32	0.86	1.21 (0.22)	93.75	6.25	0.00	C62
Kidney & urinary NOS	53	1.43	2.79 (0.41)	67.92	24.53	7.55	C64-66,68
Bladder	356	9.62	17.65 (1.00)	53.09	40.17	6.74	C67
Brain & nervous sytem	111	3.00	5.31 (0.53)	56.76	12.61	30.63	C70-72
Thyroid	63	1.70	2.82 (0.37)	79.37	15.87	4.76	C73
Ill-defined	44	1.19	2.12 (0.34)	84.09	9.09	6.82	C76-80
Lymphoma	127	3.43	6.49 (0.61)	77.95	11.02	11.02	C81-85,90,88,96
Leukaemia	196	5.29	9.66 (0.73)	70.41	8.67	20.92	C91-95
All sites but C44	3436	92.81	167.20 (3.04)	64.58	13.45	21.97	ALLbC44

FEMALE

SITE	Cases	% Total	ASR(se)	MV(%)	CLIN(%)	DCO(%)	ICD10
Mouth & pharynx	55	1.91	2.70 (0.38)	85.45	10.91	3.64	C00-14
Oesophagus	157	5.44	7.07 (0.60)	61.15	13.38	25.48	C15
Stomach	302	10.46	13.30 (0.81)	54.30	7.95	37.75	C16
Colon, rectum, anus	299	10.36	13.81 (0.83)	64.88	12.37	22.74	C18-21
Liver	82	2.84	3.48 (0.41)	26.83	13.41	59.76	C22
Pancreas	42	1.46	1.83 (0.30)	59.52	11.90	28.57	C25
Larynx	20	0.69	0.93 (0.22)	55.00	15.00	30.00	C32
Lung, trachea, bronchus	117	4.05	5.00 (0.49)	47.01	4.27	48.72	C33-34
Pleura & other thoracic	27	0.94	1.24 (0.25)	77.78	14.81	7.41	C37-38
Melanoma of skin	3	0.10	0.11 (0.07)	66.67	33.33	0.00	C43
Breast	682	23.63	31.18 (1.23)	78.74	10.26	11.00	C50
Cervix	39	1.35	1.77 (0.29)	84.62	10.26	5.13	C53
Corpus & Uterus NOS	60	2.08	2.84 (0.38)	70.00	20.00	10.00	C54-55
Ovary & adnexa	97	3.36	4.77 (0.50)	85.57	11.34	3.09	C56
Kidney & urinary NOS	47	1.63	2.38 (0.36)	61.70	31.91	6.38	C64-66,68
Bladder	87	3.01	3.86 (0.43)	58.62	32.18	9.20	C67
Brain & nervous sytem	67	2.32	3.27 (0.42)	59.70	13.43	26.87	C70-72
Thyroid	175	6.06	7.78 (0.61)	79.43	18.86	1.71	C73
Ill-defined	42	1.46	1.90 (0.31)	83.33	4.76	11.90	C76-80
Lymphoma	68	2.36	3.14 (0.40)	83.82	10.29	5.88	C81-85,90,88,96
Leukaemia	117	4.05	5.53 (0.53)	70.94	9.40	19.66	C91-95
All sites but C44	2752	95.36	125.82 (2.50)	68.39	12.46	19.15	ALLbC44

Cases of unknown age (0 M / 0 F) were excluded from these analyses

Tabriz Cancer Registry (1394)

Table 6. Number of cases in major diagnosis groups in single calendar years of observation

MALES	
SITE	1394
Lip, oral cavity and pharynx (C14-00)	110 (3.2)
Digestive organs (C26-15)	1410 (41)
Respiratory organs (C39-30)	445 (13)
Bone, cartilage, melanoma (C43-40)	39 (1.1)
Male genital (C63-60)	402 (11.7)
Urinary organs (C68-64)	407 (11.8)
Eye, brain, thyroid etc. (C75-69)	187 (5.4)
Haematopoietic (C96-81)	323 (9.4)
Other and unspecified (O&U)	99 (2.9)
All sites but C44 (ALLbC44)	3436 (100)
FEMALES	
SITE	1394
Lip, oral cavity and pharynx (C14-00)	55 (2)
Digestive organs (C26-15)	952 (34.6)
Respiratory organs (C39-30)	170 (6.2)
Bone, cartilage, melanoma (C43-40)	31 (1.1)
Breast (C50)	682 (24.8)
Female genital (C58-51)	207 (7.5)
Urinary organs (C68-64)	133 (4.8)
Eye, brain, thyroid etc. (C75-69)	252 (9.2)
Haematopoietic (C96-81)	185 (6.7)
Other and unspecified (O&U)	84 (3.1)
All sites but C44 (ALLbC44)	2752 (100)

BOTH SEXES

SITE	1394
Lip, oral cavity and pharynx (C14-00)	165 (2.7)
Digestive organs (C26-15)	2362 (38.2)
Respiratory organs (C39-30)	615 (9.9)
Bone, cartilage, melanoma (C43-40)	70 (1.1)
Breast (C50)	696 (11.2)
Female genital (C58-51)	207 (3.3)
Male genital (C63-60)	403 (6.5)
Urinary organs (C68-64)	540 (8.7)
Eye, brain, thyroid etc. (C75-69)	439 (7.1)
Haematopoietic (C96-81)	508 (8.2)
Other and unspecified (O&U)	183 (3)
All sites but C44 (ALLbC44)	6188 (100)

Tabriz Cancer Registry (1394)

Table 7. ASR in major diagnosis groups in single calendar years of observation

MALES	
SITE	1394
Lip, oral cavity and pharynx (C14-00)	5.4 (3.2)
Digestive organs (C26-15)	68.65 (41.1)
Respiratory organs (C39-30)	21.65 (12.9)
Bone, cartilage, melanoma (C43-40)	2.06 (1.2)
Male genital (C63-60)	18.58 (11.1)
Urinary organs (C68-64)	20.29 (12.1)
Eye, brain, thyroid etc. (C75-69)	8.78 (5.3)
Haematopoietic (C96-81)	16.15 (9.7)
Other and unspecified (O&U)	5.01 (3)
All sites but C44 (ALLbC44)	167.2 (100)
FEMALES	
SITE	1394
Lip, oral cavity and pharynx (C14-00)	2.7 (2.1)
Digestive organs (C26-15)	42.45 (33.7)
Respiratory organs (C39-30)	7.41 (5.9)
Bone, cartilage, melanoma (C43-40)	1.56 (1.2)
Breast (C50)	31.18 (24.8)
Female genital (C58-51)	9.91 (7.9)
Urinary organs (C68-64)	6.2 (4.9)
Eye, brain, thyroid etc. (C75-69)	11.63 (9.2)
Haematopoietic (C96-81)	8.67 (6.9)
Other and unspecified (O&U)	4.06 (3.2)
All sites but C44 (ALLbC44)	125.82 (100)

BOTH SEXES

SITE	1394
Lip, oral cavity and pharynx (C14-00)	3.99 (2.8)
Digestive organs (C26-15)	54.9 (37.8)
Respiratory organs (C39-30)	14.22 (9.8)
Bone, cartilage, melanoma (C43-40)	1.81 (1.2)
Breast (C50)	16.22 (11.2)
Female genital (C58-51)	5.09 (3.5)
Male genital (C63-60)	8.89 (6.1)
Urinary organs (C68-64)	12.92 (8.9)
Eye, brain, thyroid etc. (C75-69)	10.22 (7)
Haematopoietic (C96-81)	12.3 (8.5)
Other and unspecified (O&U)	4.5 (3.1)
All sites but C44 (ALLbC44)	145.06 (100)

Table 11
Tabriz Cancer Registry (1394)
 Census1394

Cases by age group (Period) - Female

SITE	ALL AGE AGES UNK	Cases by age group (Period) - Female													ICD (10th)										
		0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50	50-55	55-60	60-65		65-70	70-75	75-80	80-85	85+	(%)				
Lip	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C00	
Tongue	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C01-02	
Mouth	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C03-06	
Salivary glands	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C07-08	
Tonsil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C09	
Other oropharynx	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C10	
Nasopharynx	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C11	
Hypopharynx	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C12-13	
Pharynx unspecified	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C14	
Oesophagus	157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C15	
Stomach	302	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C16	
Small intestine	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C17	
Colon	213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C18	
Rectum	81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C19-20	
Anus	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C21	
Liver	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C22	
Gallbladder etc.	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C23-24	
Pancreas	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C25	
Nose, sinuses etc.	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C30-31	
Larynx	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C32	
Trachea, bronchus and lung	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C33-34	
Other thoracic organs	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C37-38	
Bone	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C40-41	
Melanoma of skin	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C43	
Other skin	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C44	
Mesothelioma	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C45	
Kaposi sarcoma	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C46	
Connective and soft tissue	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C47,C49	
Breast	682	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C50	
Vulva	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C51	
Vagina	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C52	
Cervix uteri	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C53	
Corpus uteri	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C54	
Uterus unspecified	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C55	
Ovary	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C56	
Other female genital organs	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C57	
Placenta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C58	
Kidney	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C64	
Renal pelvis	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C65	
Ureter	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C66	
Bladder	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C67	
Other urinary organs	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C68	
Eye	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C69	
Brain, nervous system	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C70-72	
Thyroid	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C73	
Adrenal gland	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C74	
Other endocrine	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C75	
Hodgkin disease	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C81	
Non-Hodgkin lymphoma	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C82-85,C96	
Immunoproliferative diseases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C88	
Multiple myeloma	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C90	
Lymphoid leukaemia	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C91	
Myeloid leukaemia	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C92-94	
Leukaemia unspecified	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C95	
Myeloproliferative disorders	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MPD	
Myelodysplastic syndromes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	MDS	
Other and unspecified	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	O&U	
All sites	2886	0	12	7	10	16	35	79	134	156	212	276	299	277	315	254	260	238	182	124				ALL	
All sites but C44	2752	0	12	7	10	16	34	76	133	153	207	268	289	256	295	241	244	226	170	115				ALL but C44	
																									100.0

Figure 10.

Tabriz Cancer Registry (1394)

Age Specific Rates (Top Cancer Sites) (Females)

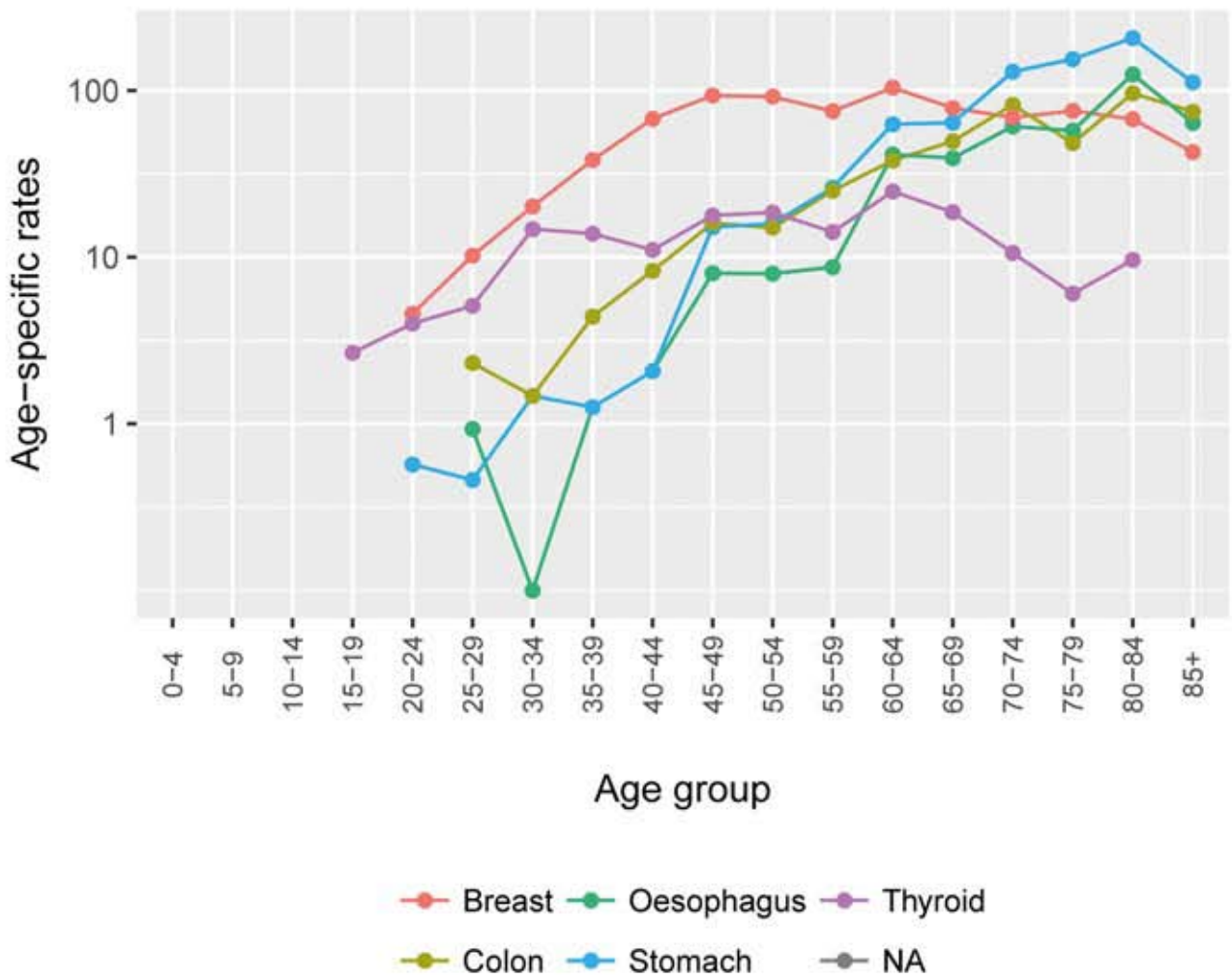


Figure 11.
Tabriz Cancer Registry (1394)
 Age Specific Rates (Top Cancer Sites) (Males)

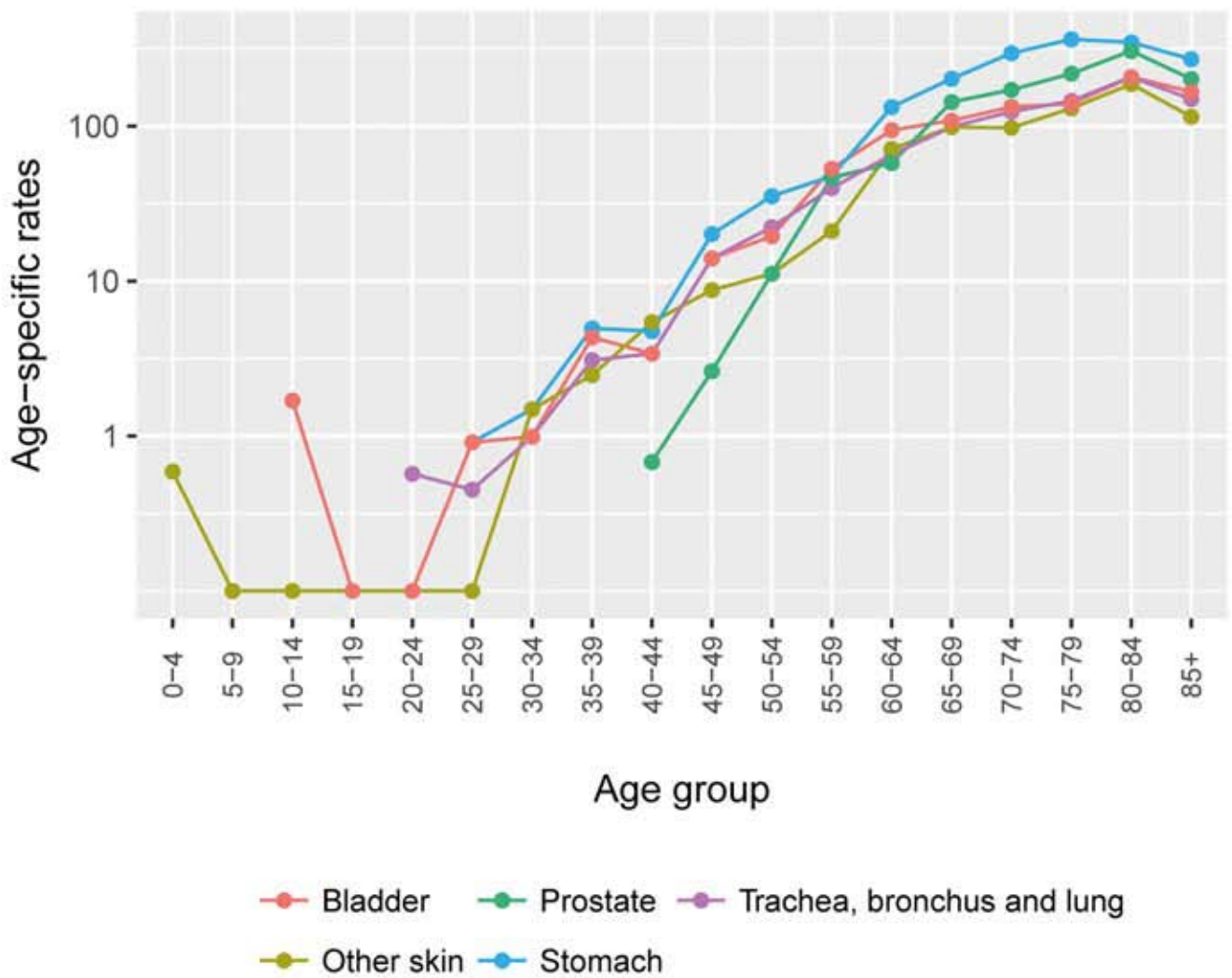


Figure 12.

Age-specific incidence rates per 100,000 in 1394

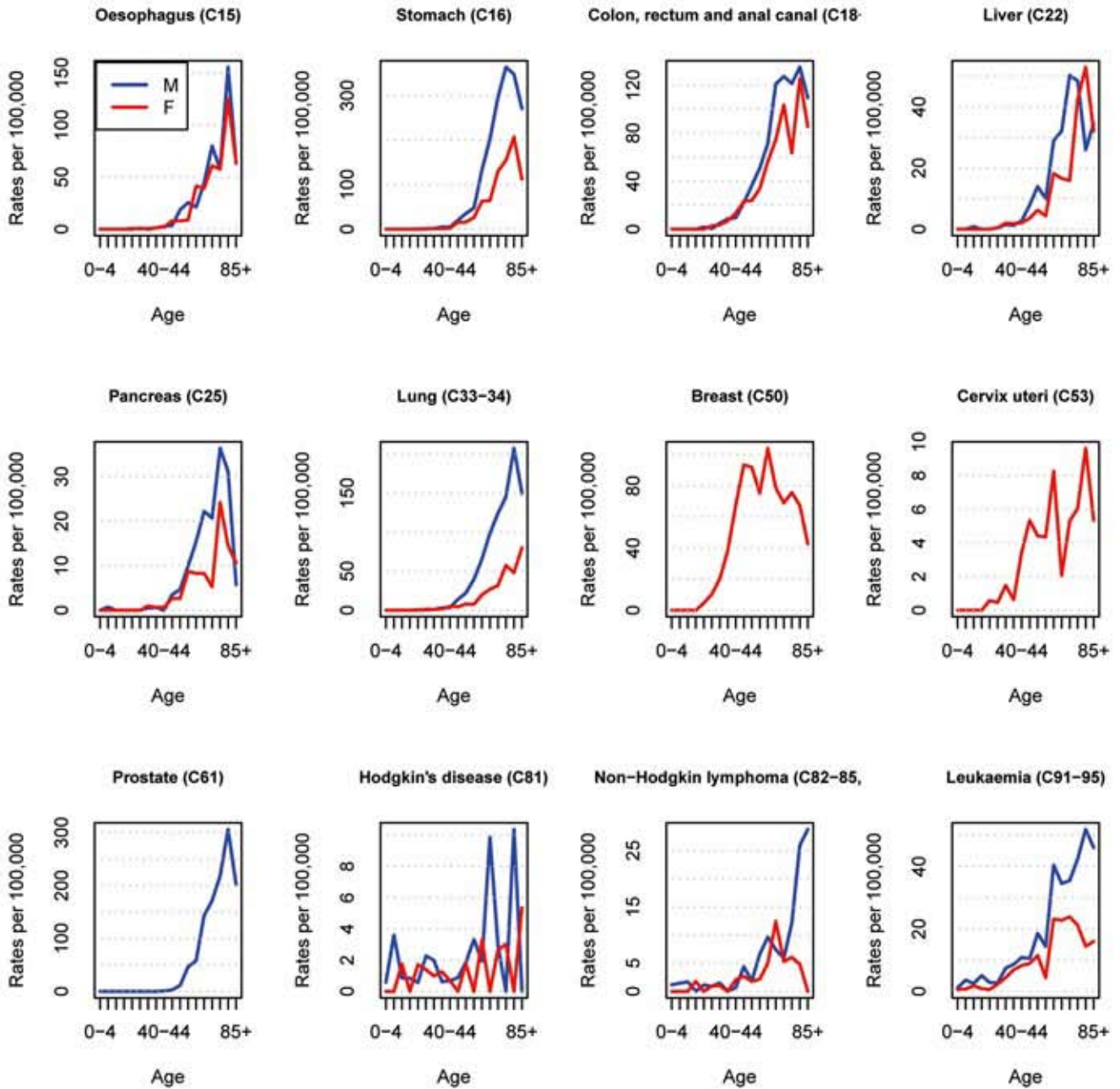


Figure 13.
Age-specific incidence rates per 100,000 in 1394
Oesophagus (C15)

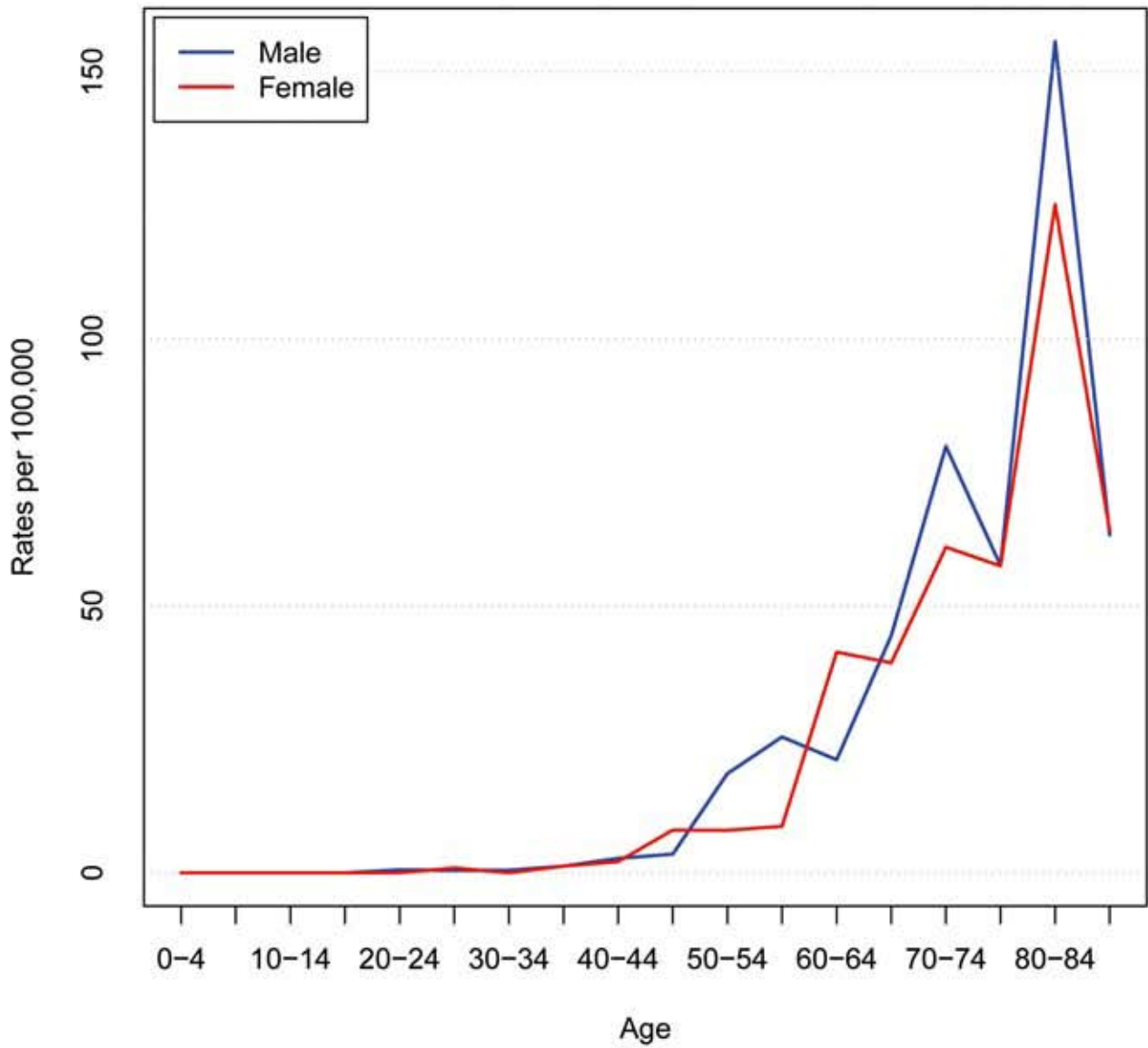


Figure 14.
Age-specific incidence rates per 100,000 in 1394
Stomach (C16)

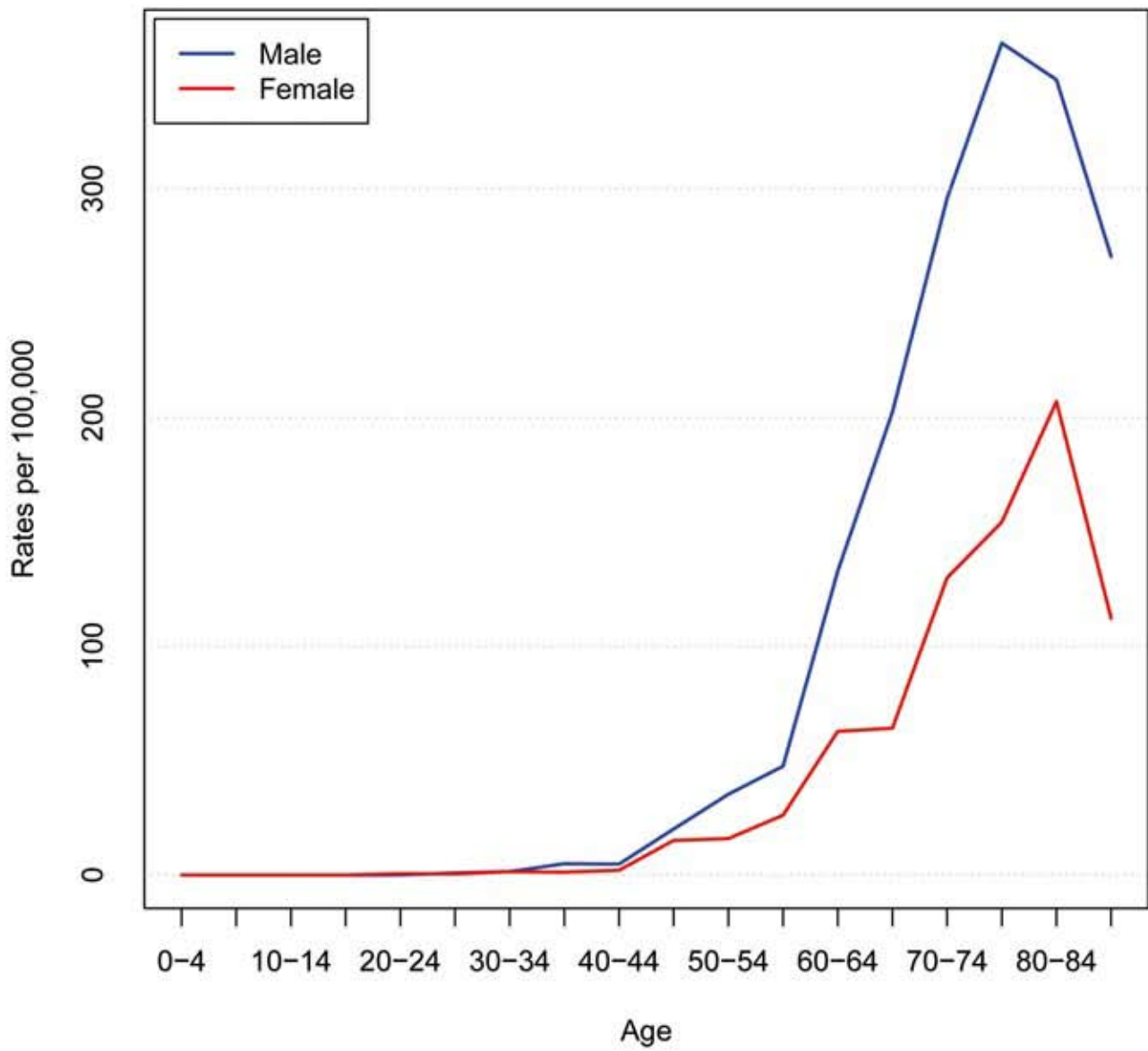


Figure 15.

**Age-specific incidence rates per 100,000 in 1394
Colon, rectum and anal canal (C18-21)**

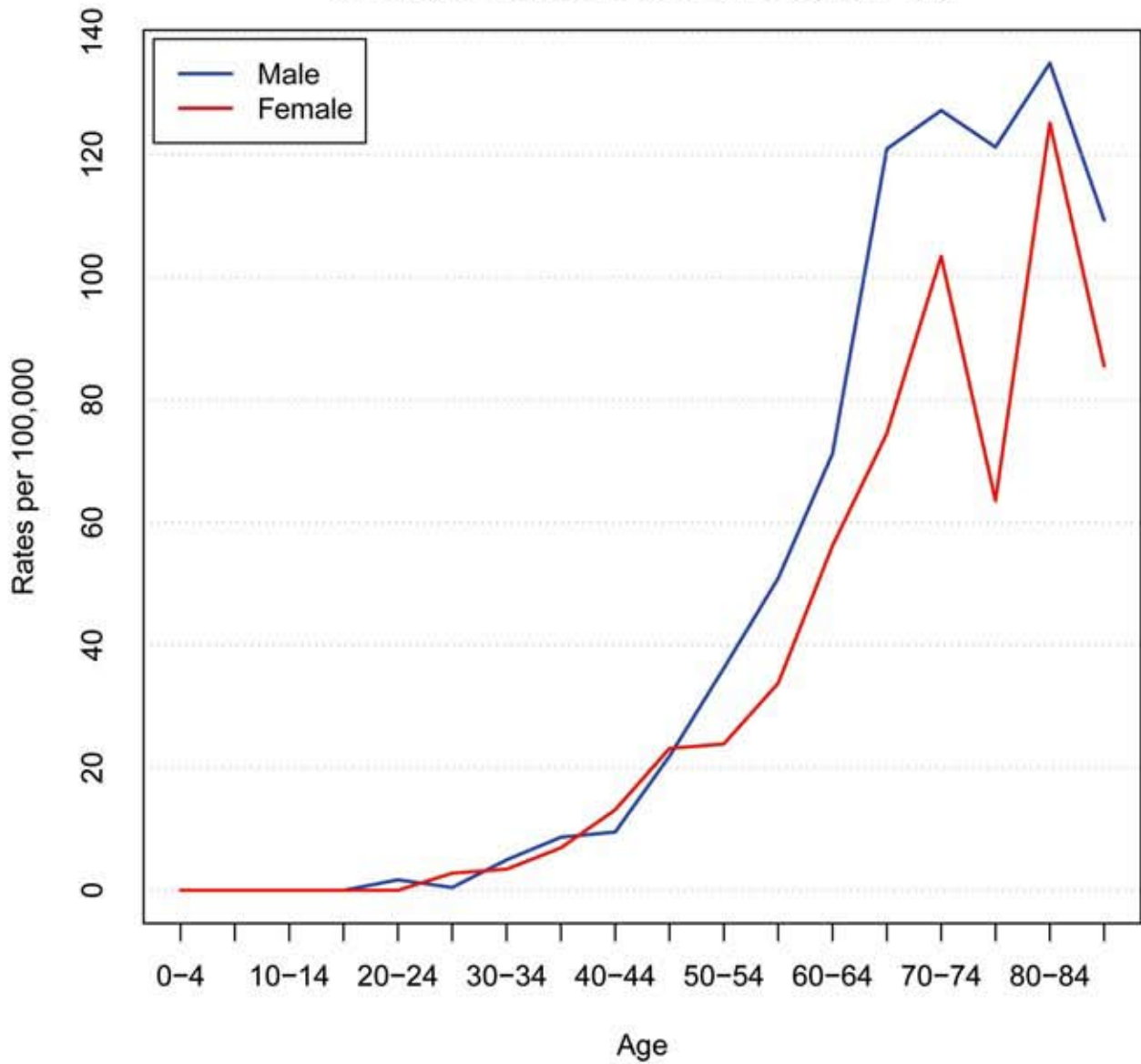


Figure 16.
Age-specific incidence rates per 100,000 in 1394
Liver (C22)

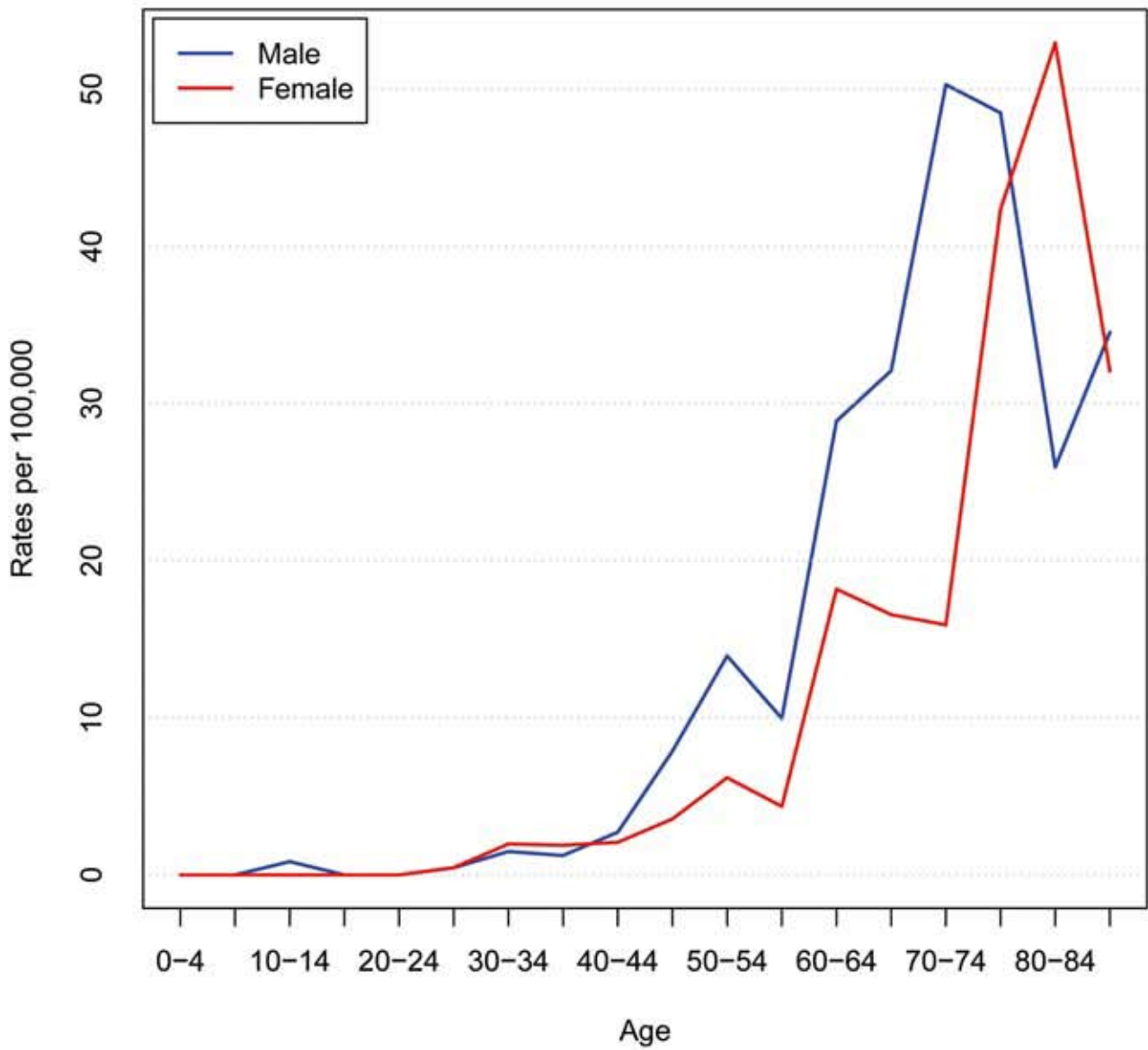


Figure 17.
Age-specific incidence rates per 100,000 in 1394
Pancreas (C25)

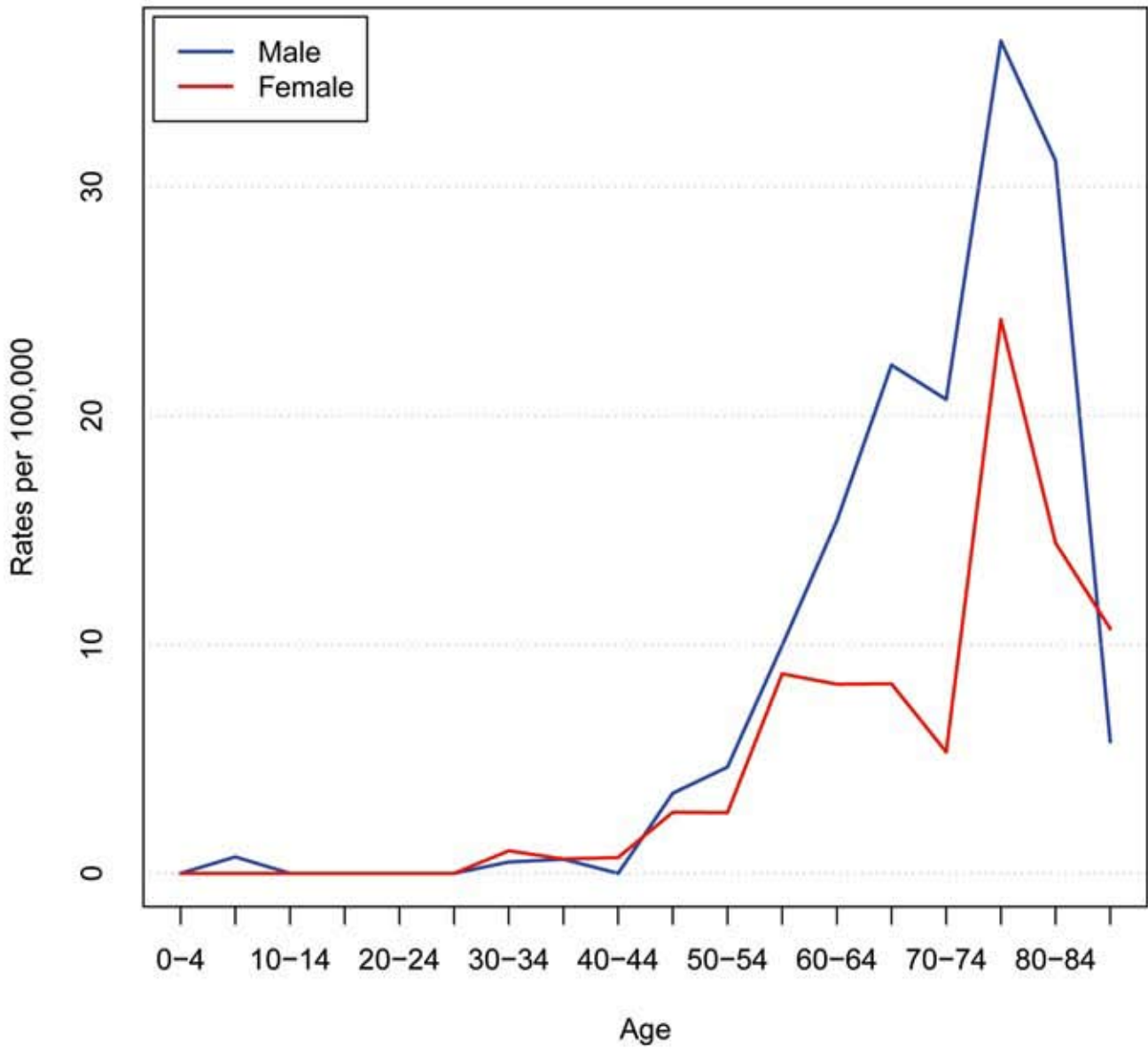


Figure 18.
Age-specific incidence rates per 100,000 in 1394
Lung (C33-34)

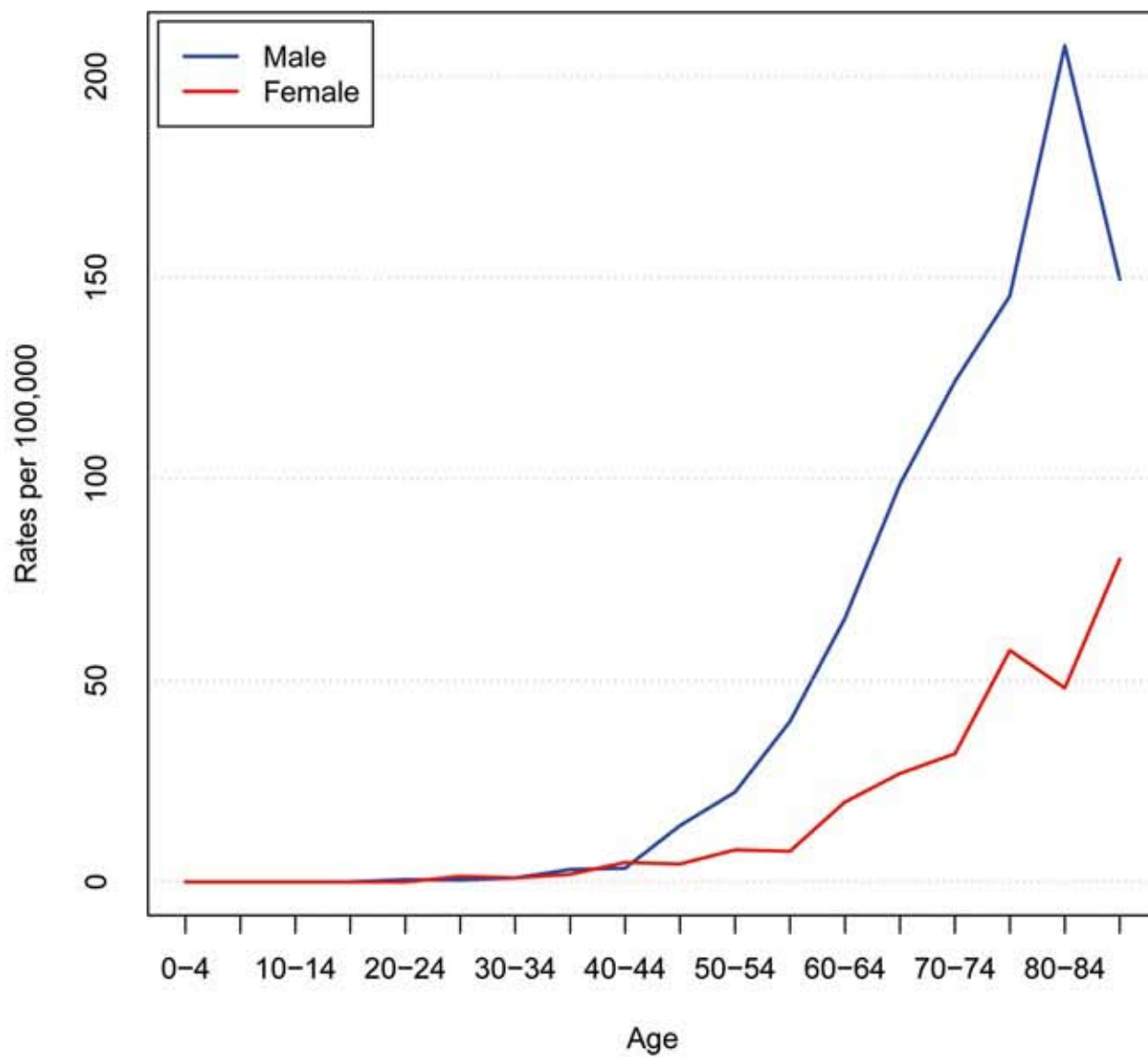


Figure 19.
Age-specific incidence rates per 100,000 in 1394
Breast (C50)

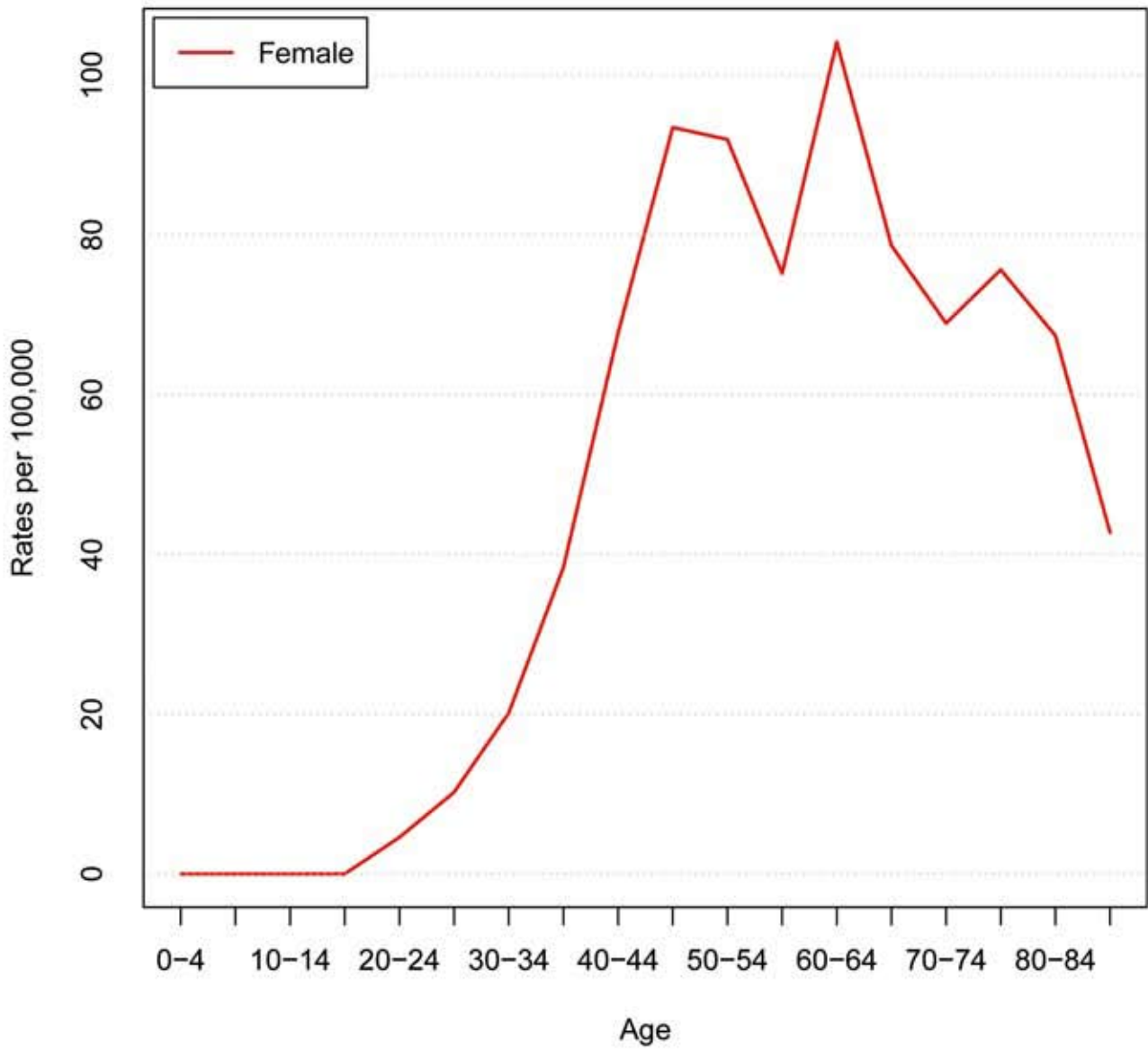


Figure 20.

**Age-specific incidence rates per 100,000 in 1394
Cervix uteri (C53)**

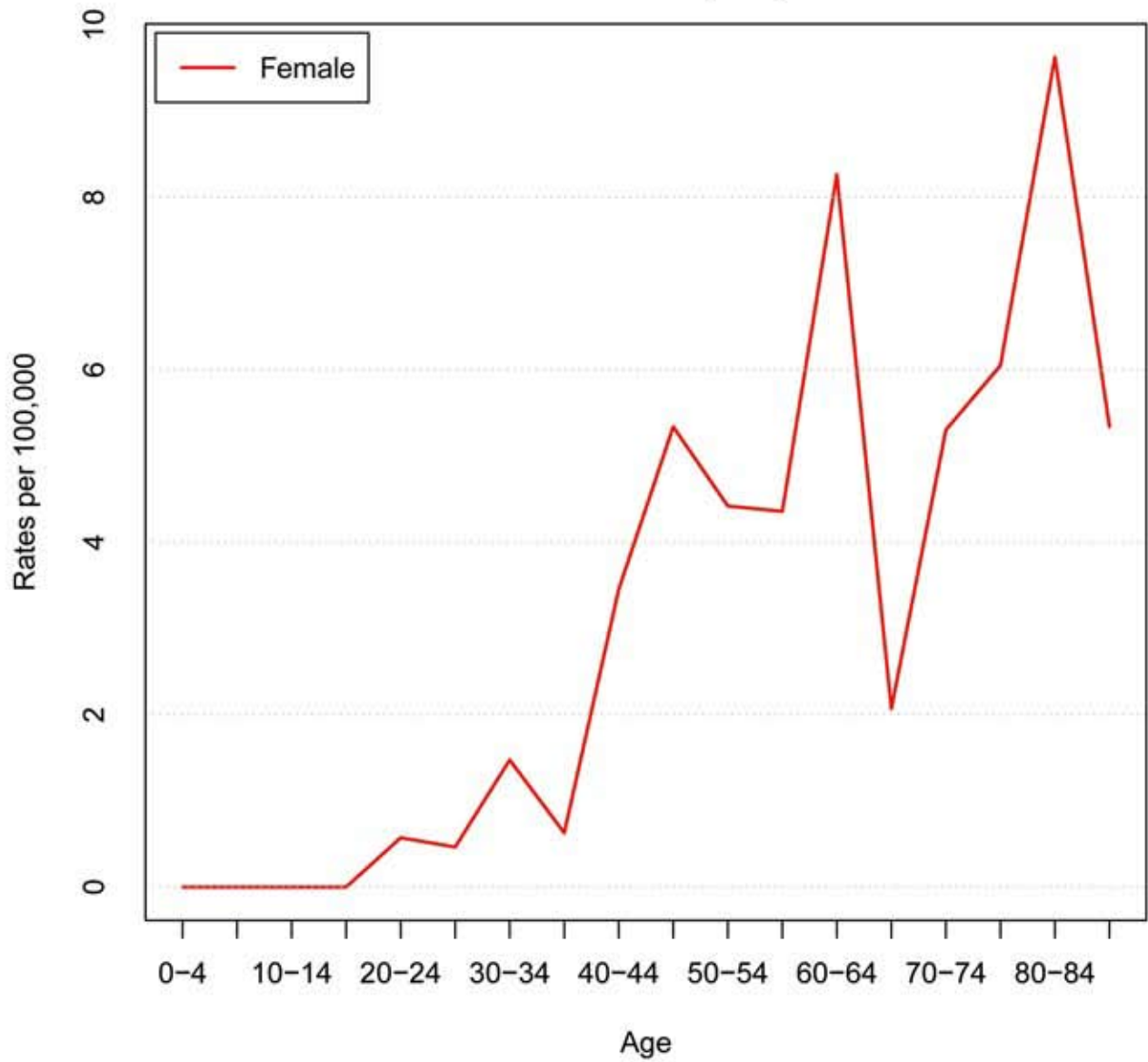


Figure 21.

**Age-specific incidence rates per 100,000 in 1394
Prostate (C61)**

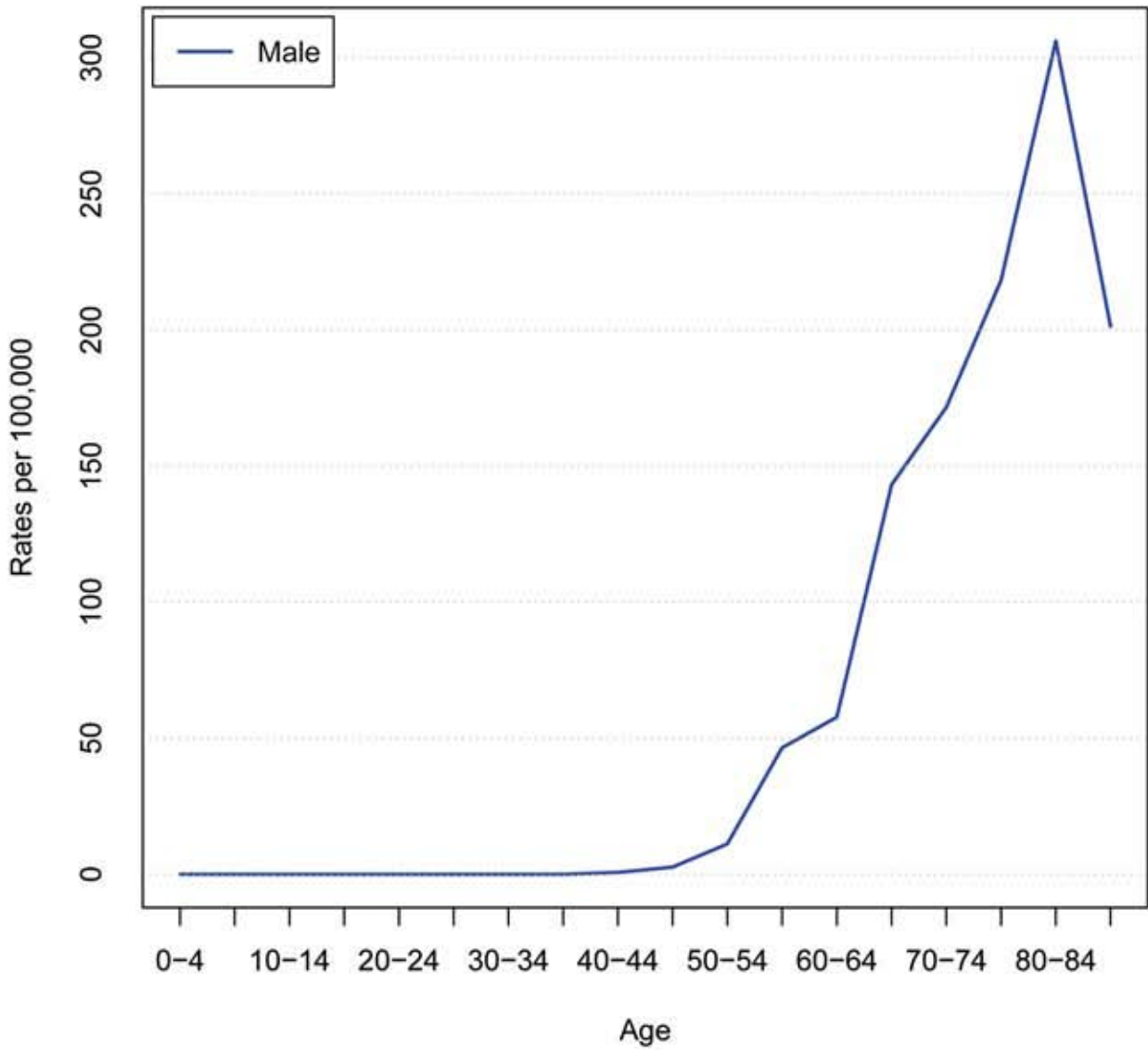


Figure 22.

**Age-specific incidence rates per 100,000 in 1394
Hodgkin's disease (C81)**

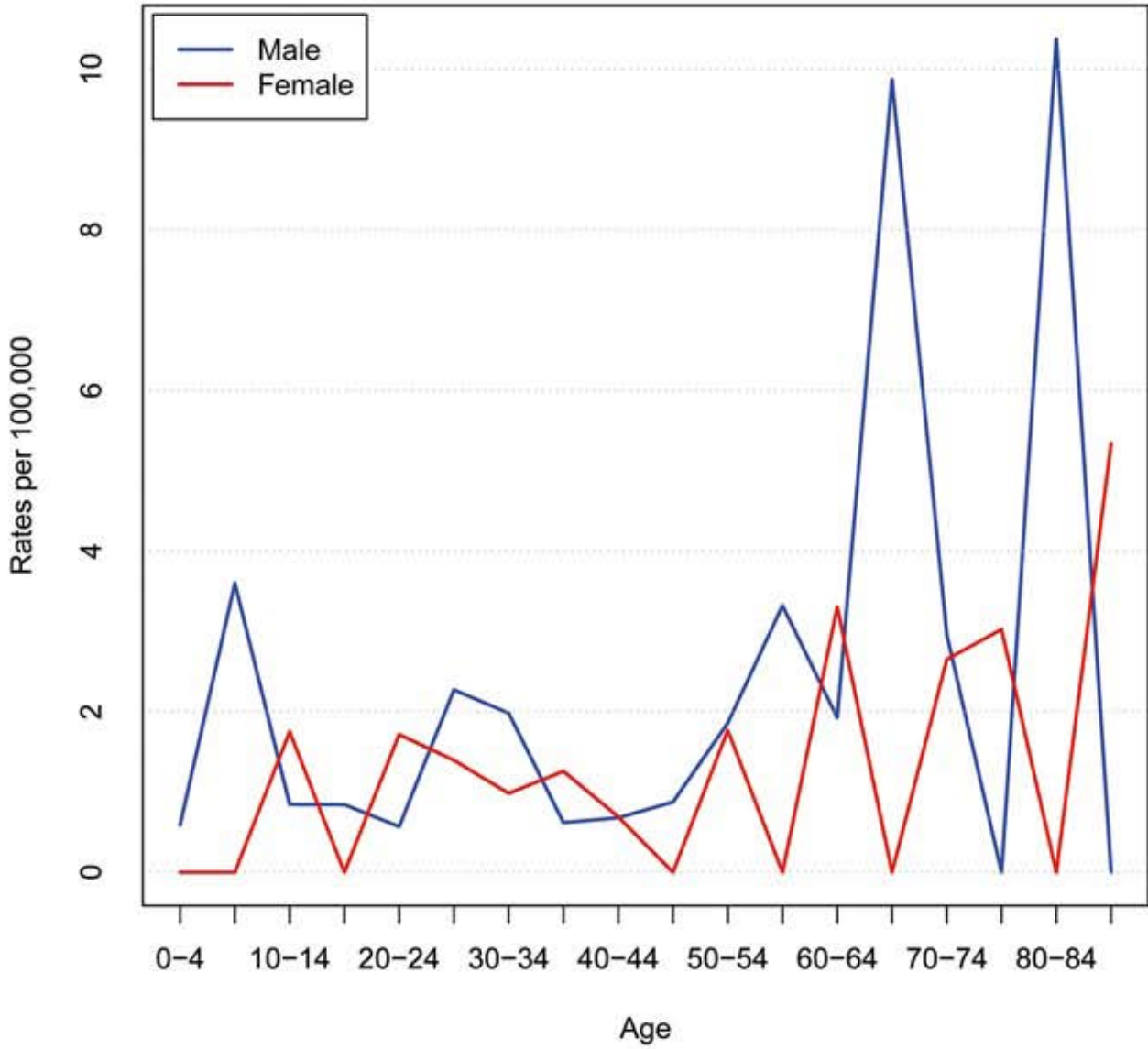


Figure 23.
Age-specific incidence rates per 100,000 in 1394
Non-Hodgkin lymphoma (C82-85,96)

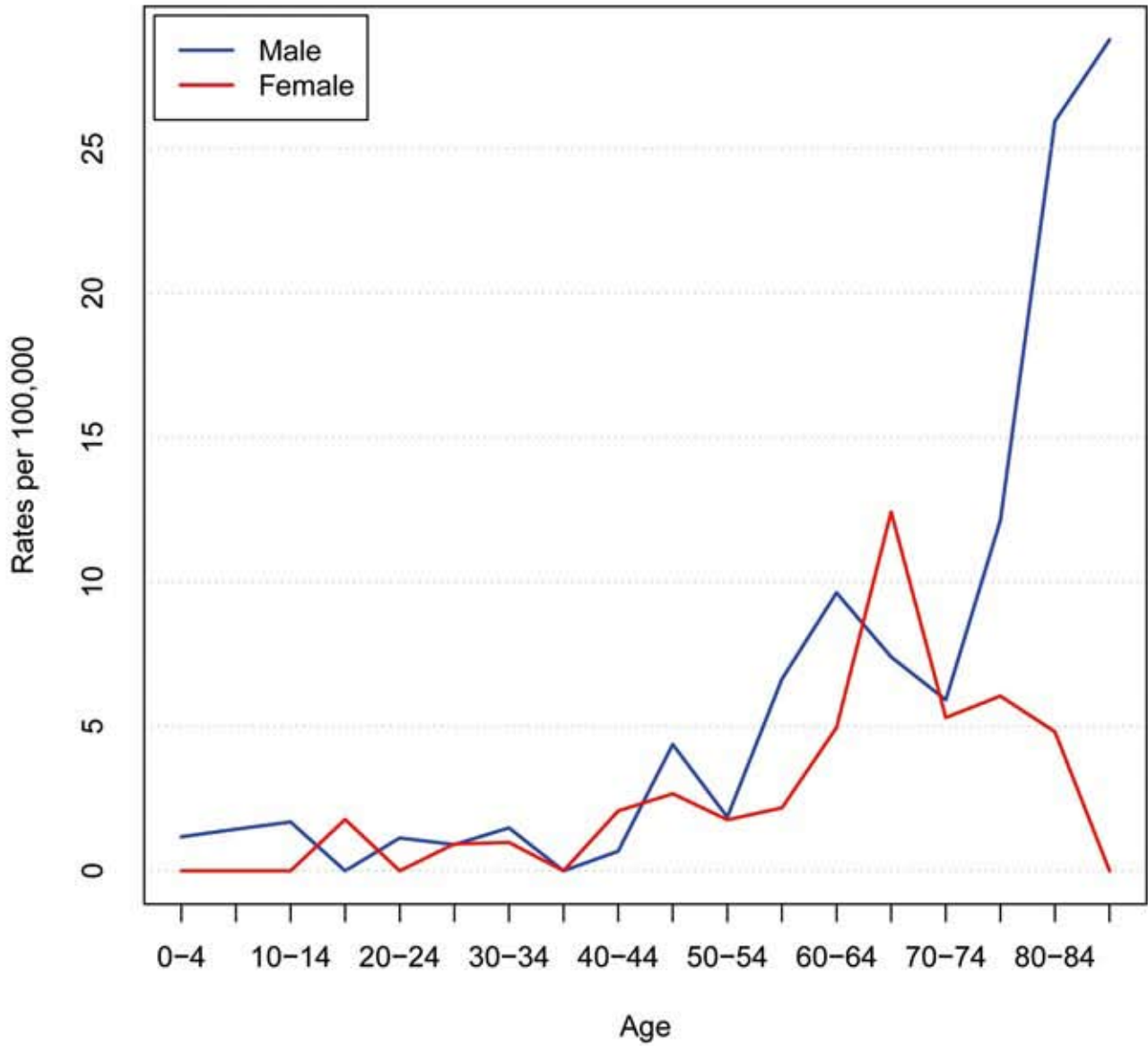


Figure 24.

**Age-specific incidence rates per 100,000 in 1394
Leukaemia (C91-95)**

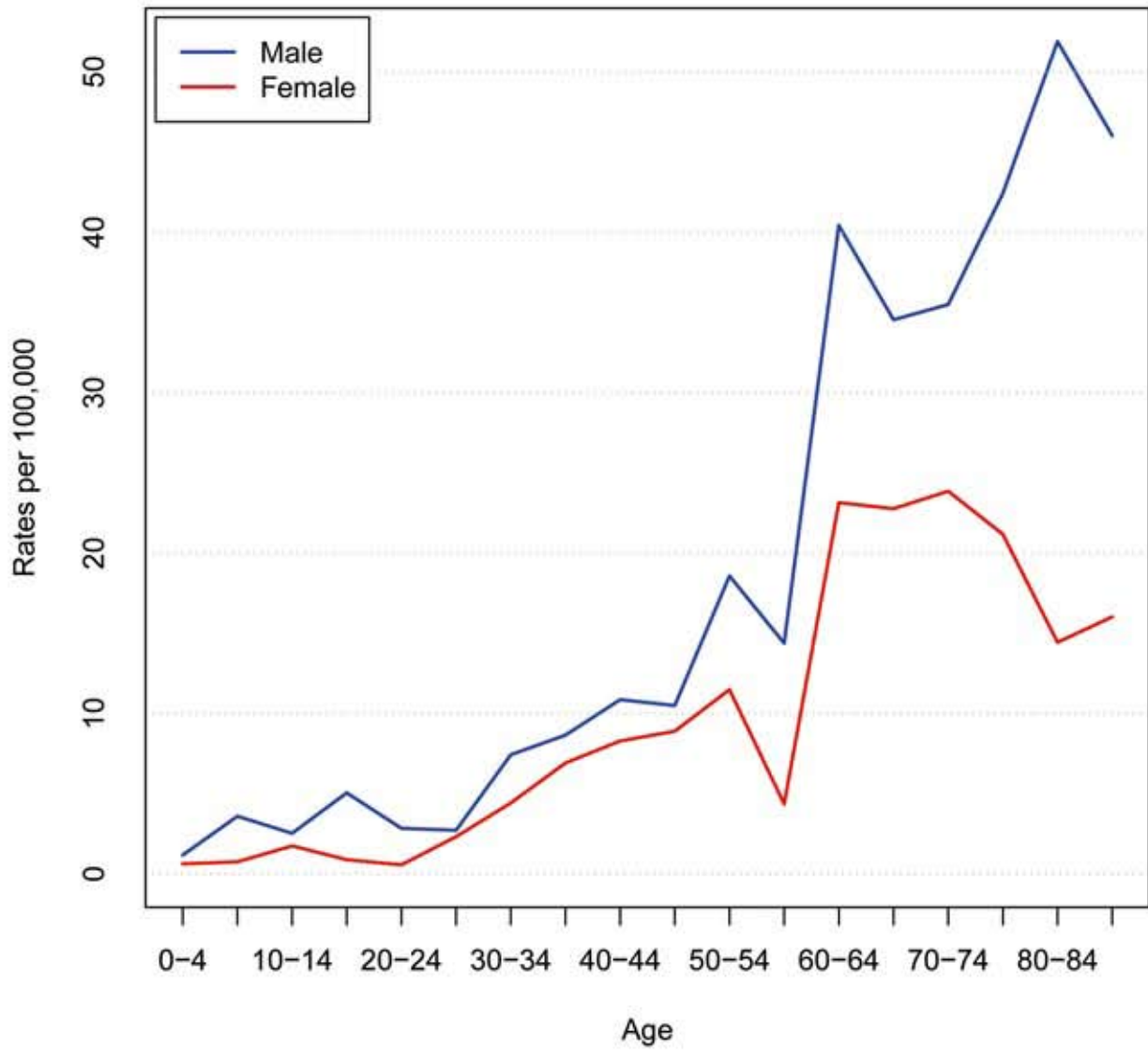


Figure 25.
Top 10 by CASES,
Tabriz Cancer Registry (1394), Female

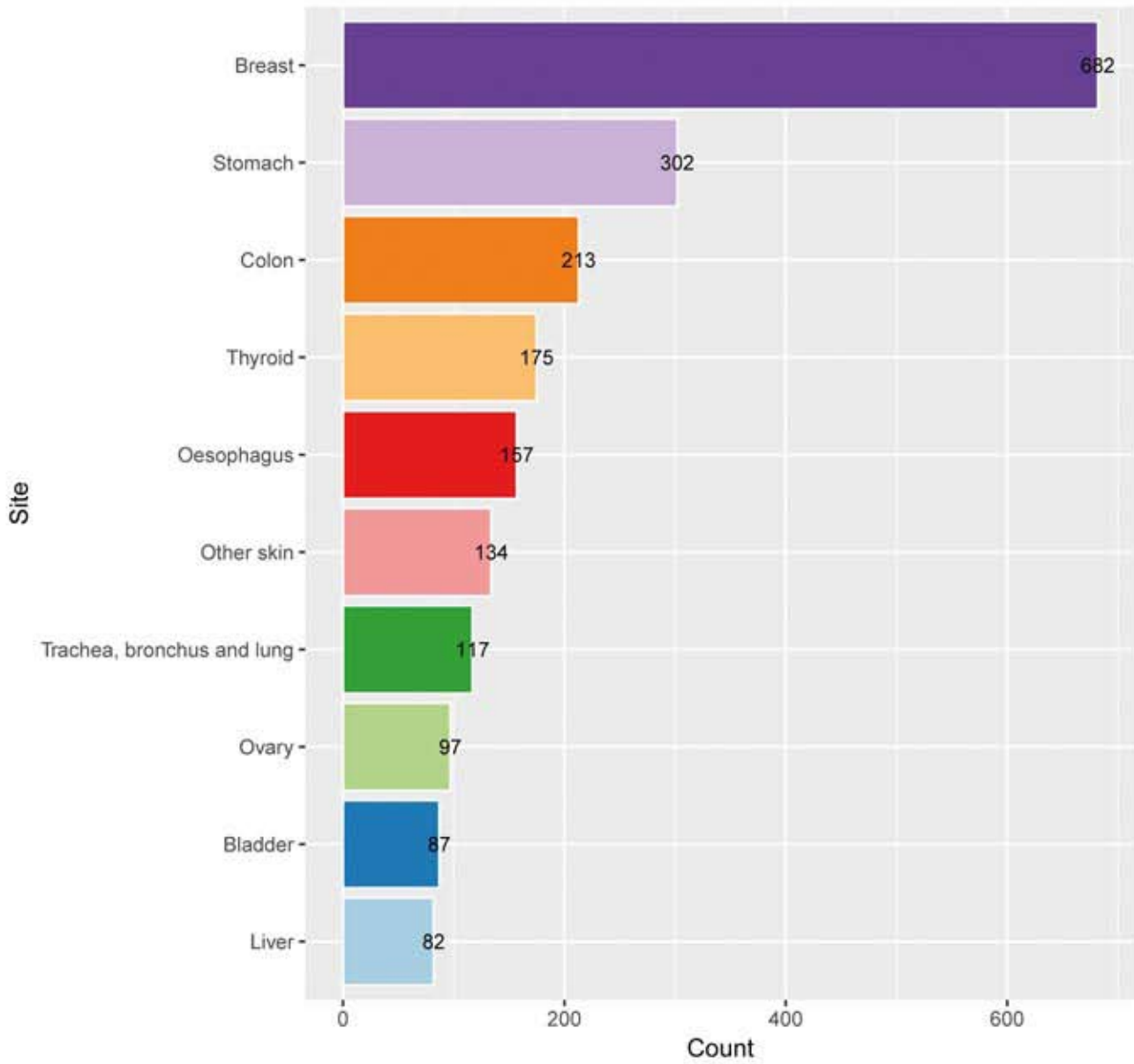


Figure 26.

Top 10 by CASES,
Tabriz Cancer Registry (1394), Male

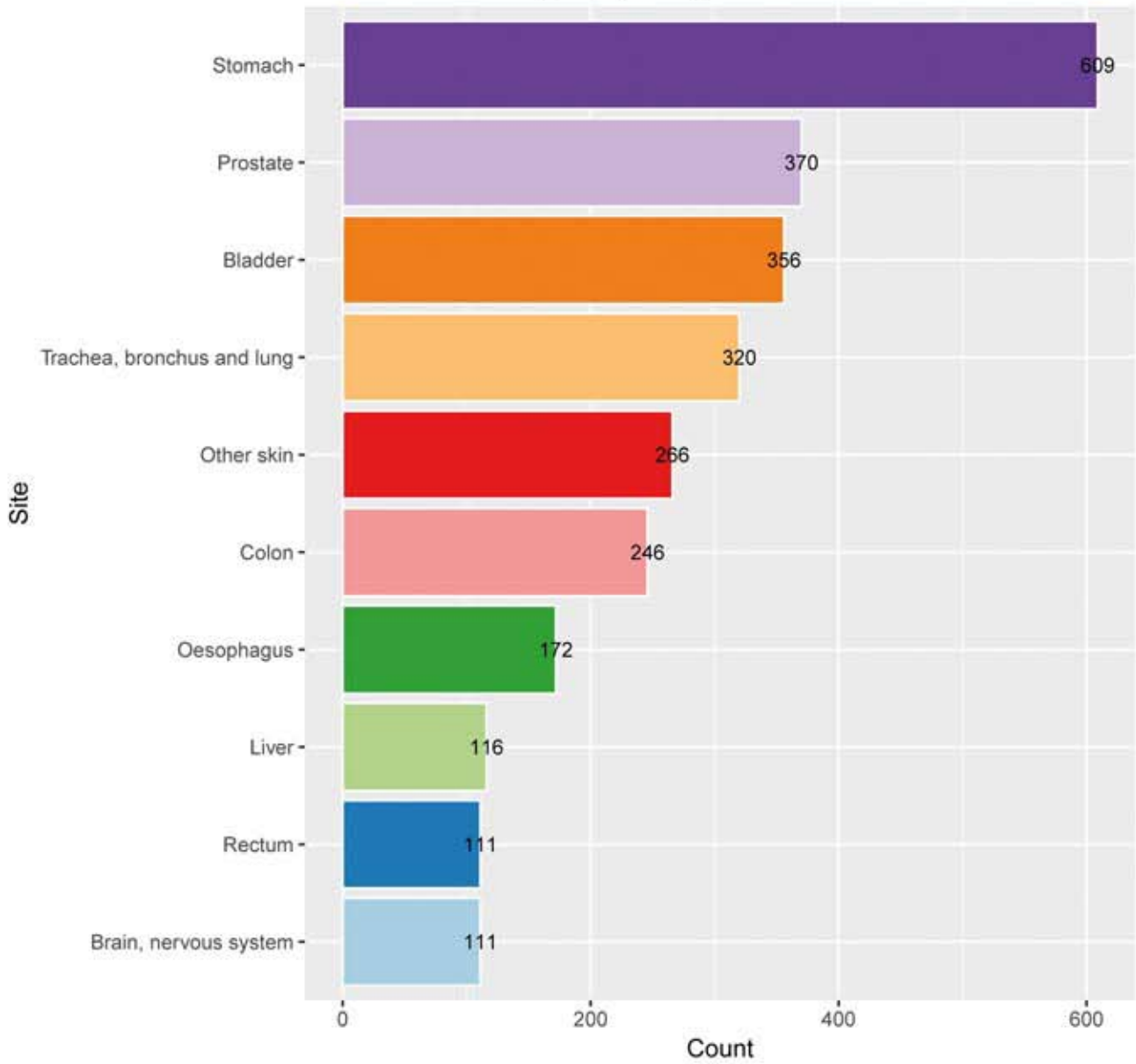


Figure 27.
Top 10 by ASR,
Tabriz Cancer Registry (1394), Female

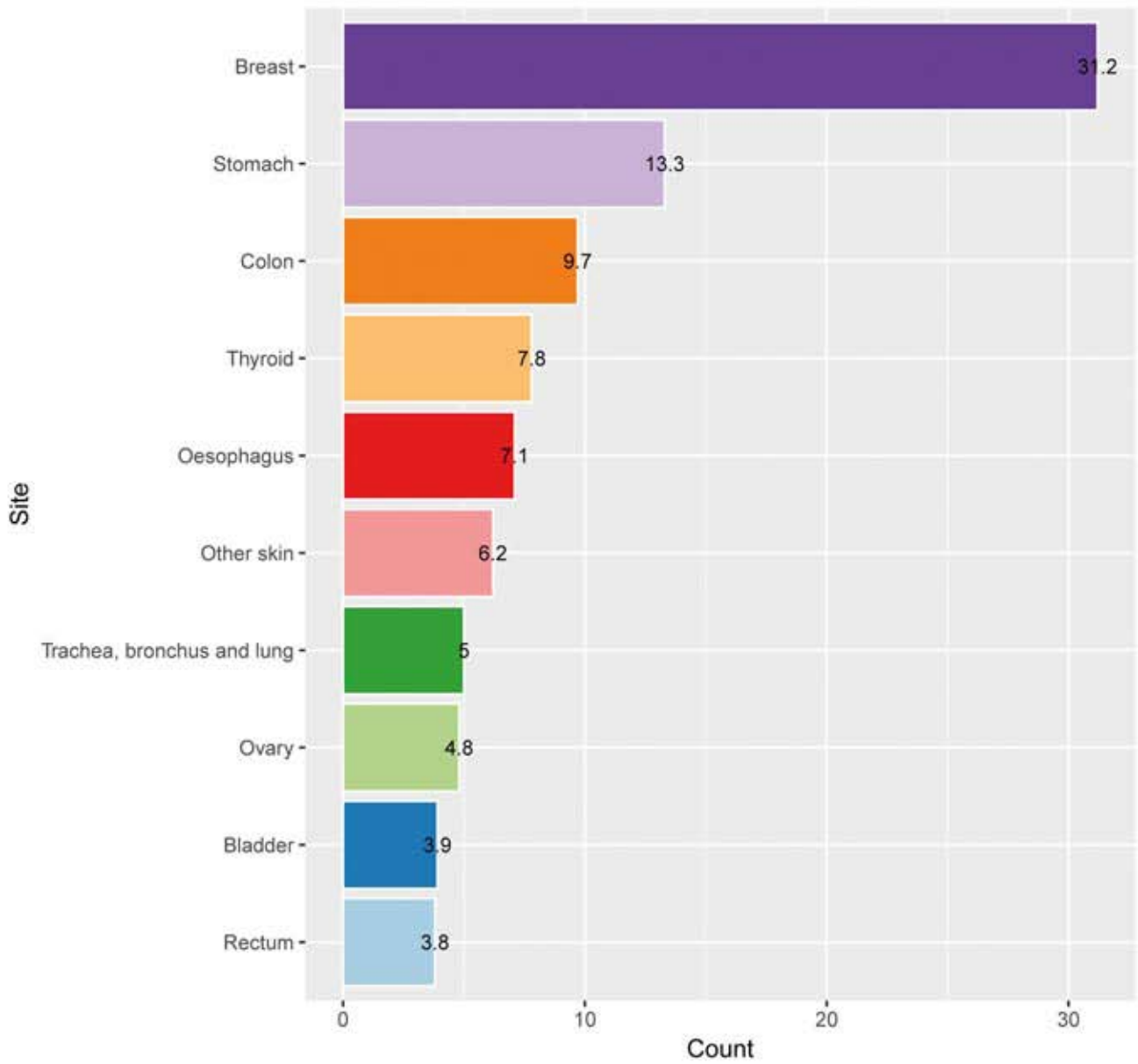


Figure 28.
Top 10 by ASR,
Tabriz Cancer Registry (1394), Male

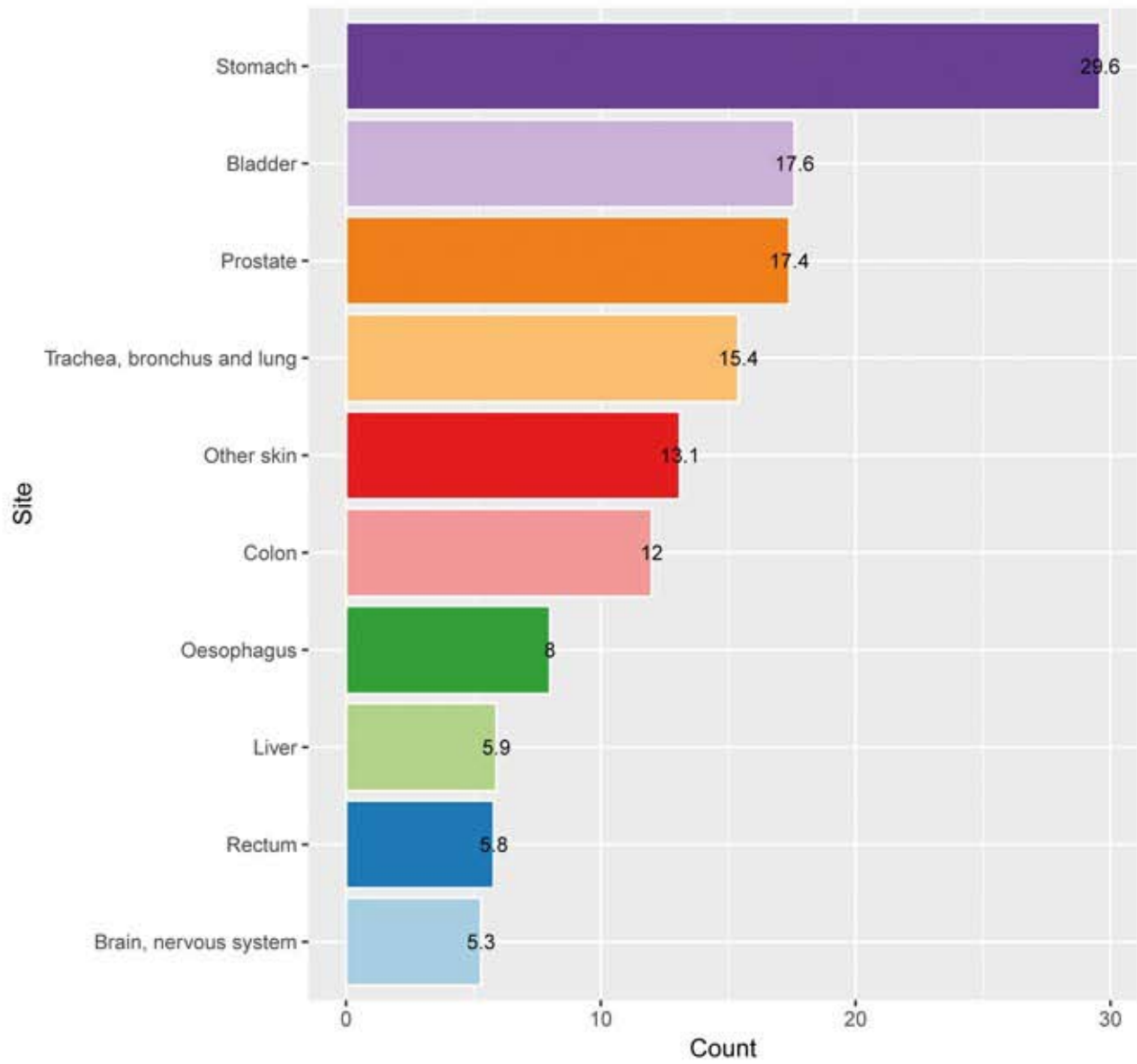


Figure 29.

Top 10 by CASES,
Tabriz Cancer Registry (1394), excluding C44, Female

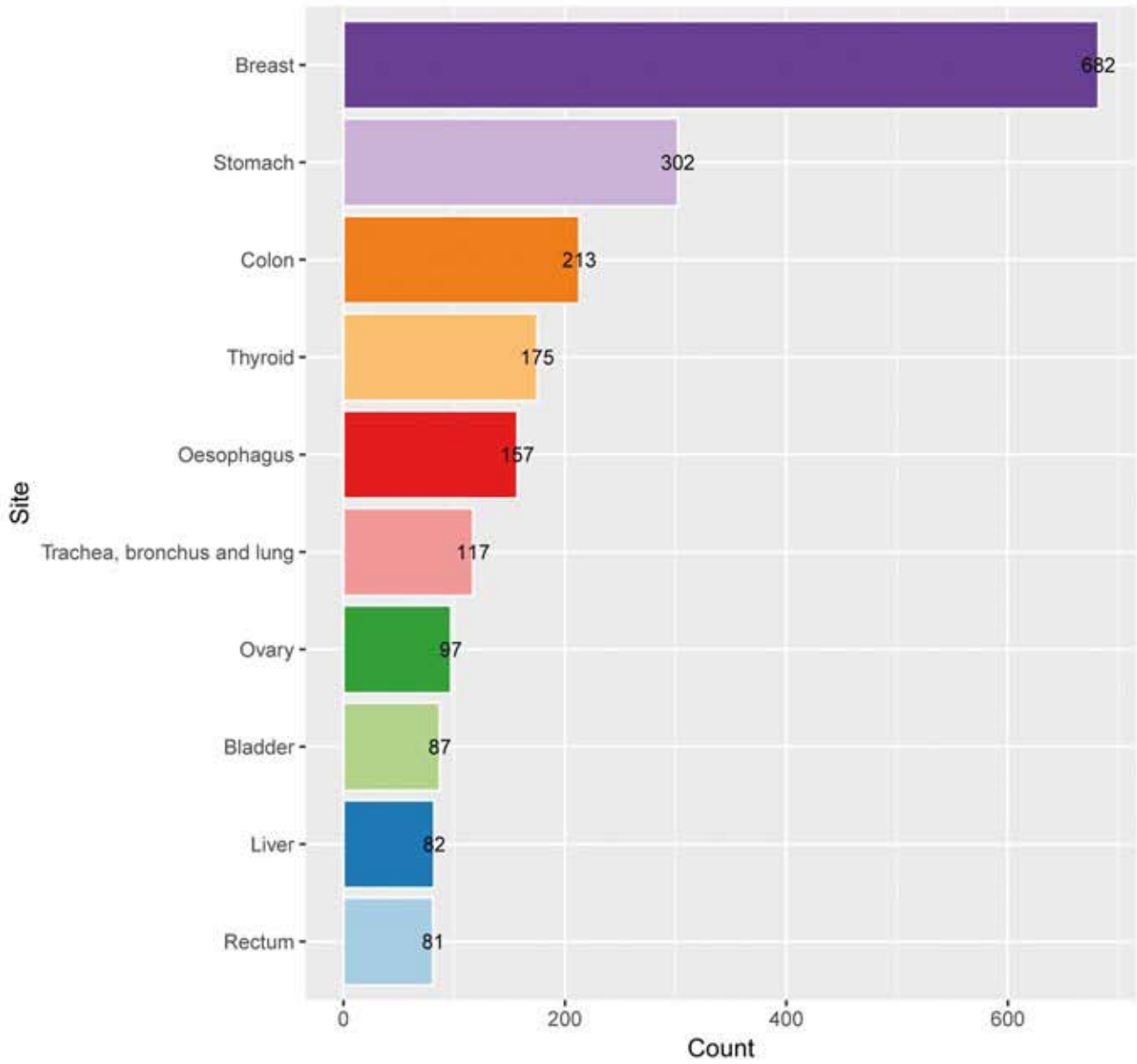


Figure 30.
Top 10 by CASES,
Tabriz Cancer Registry (1394), excluding C44, Male

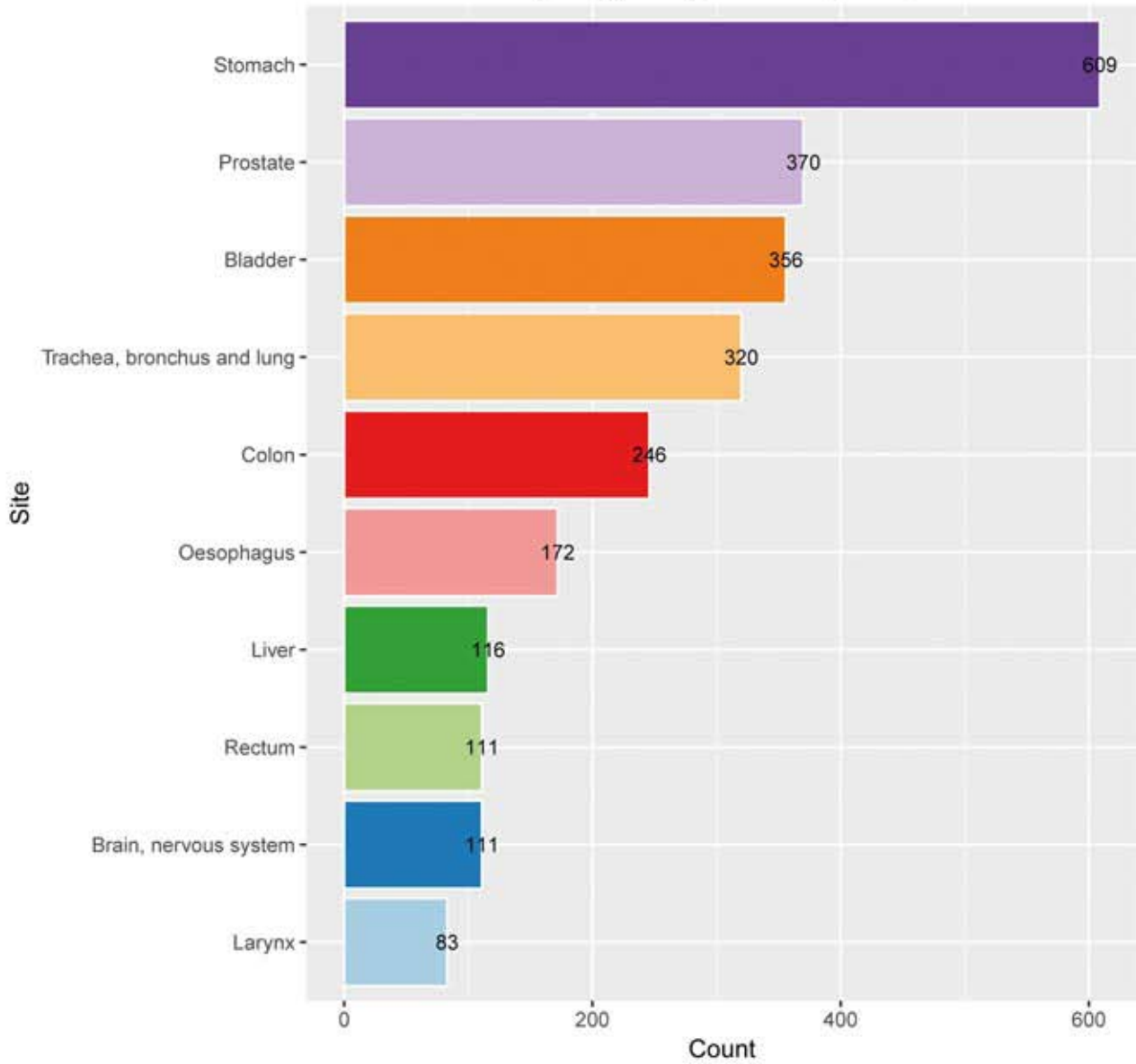


Figure 31.
Tabriz Cancer Registry (1394),
Female

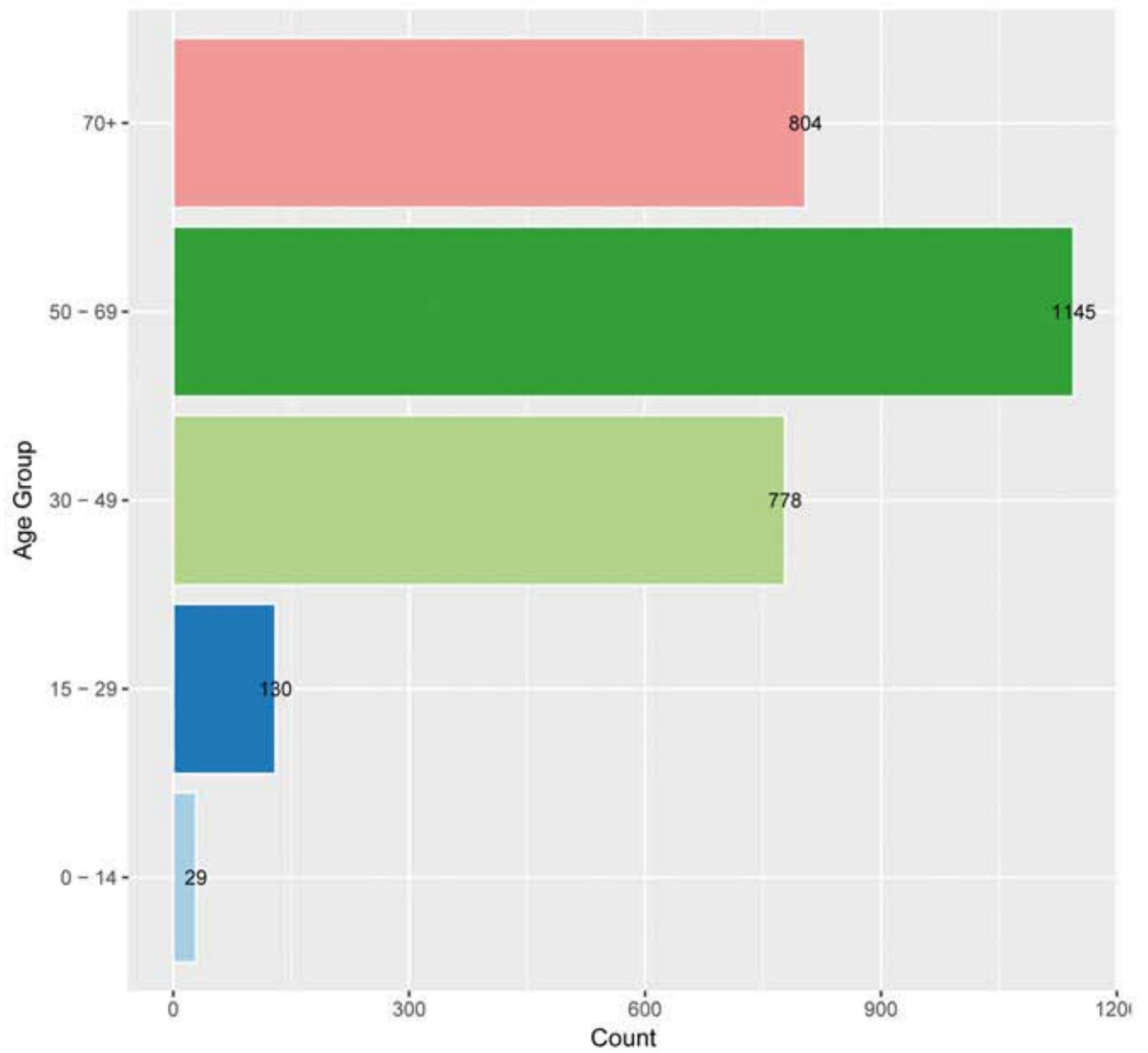


Figure 32.
Tabriz Cancer Registry (1394),
Male

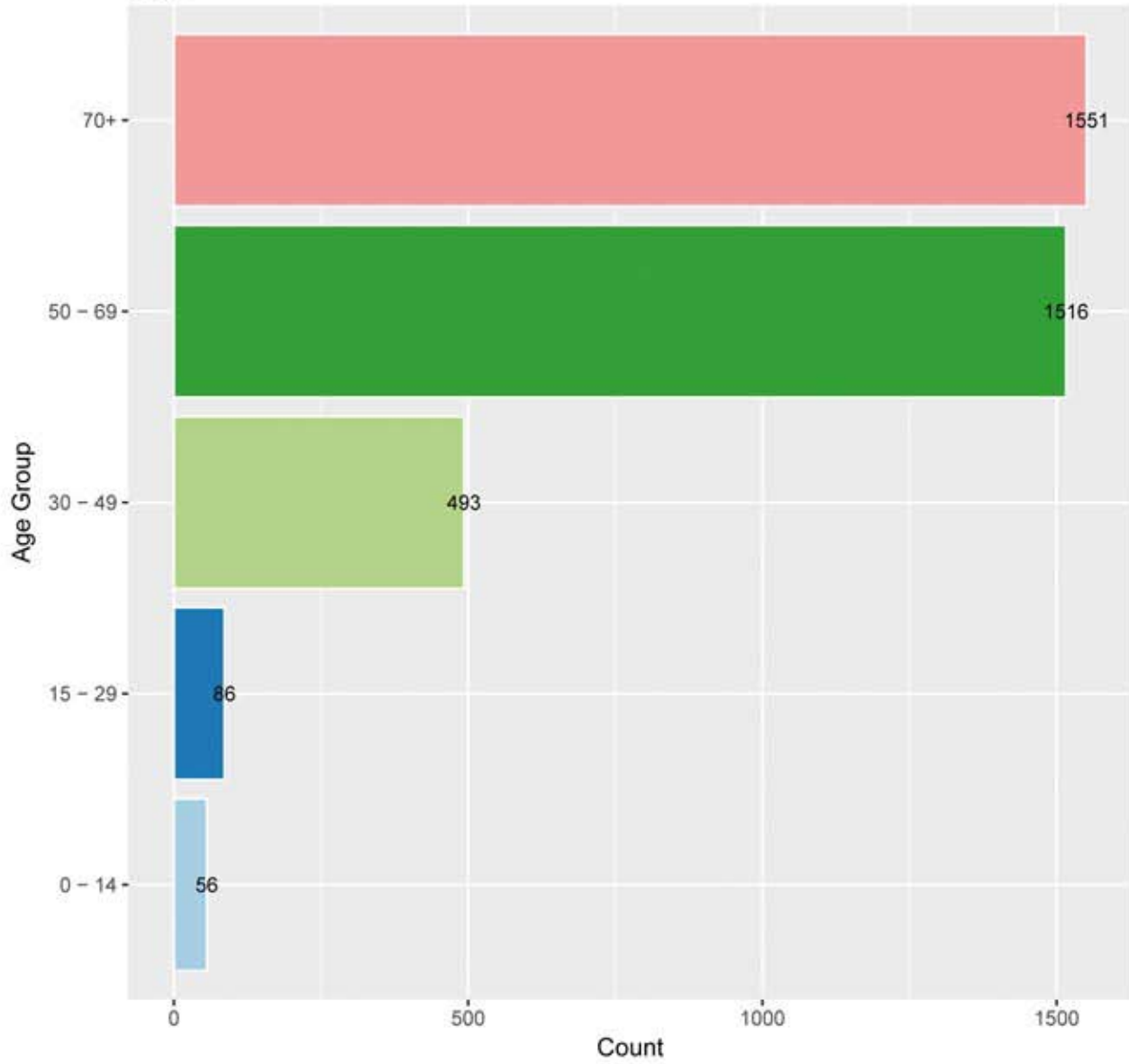


Figure 33.
Tabriz Cancer Registry (1394), excluding C44,
Female

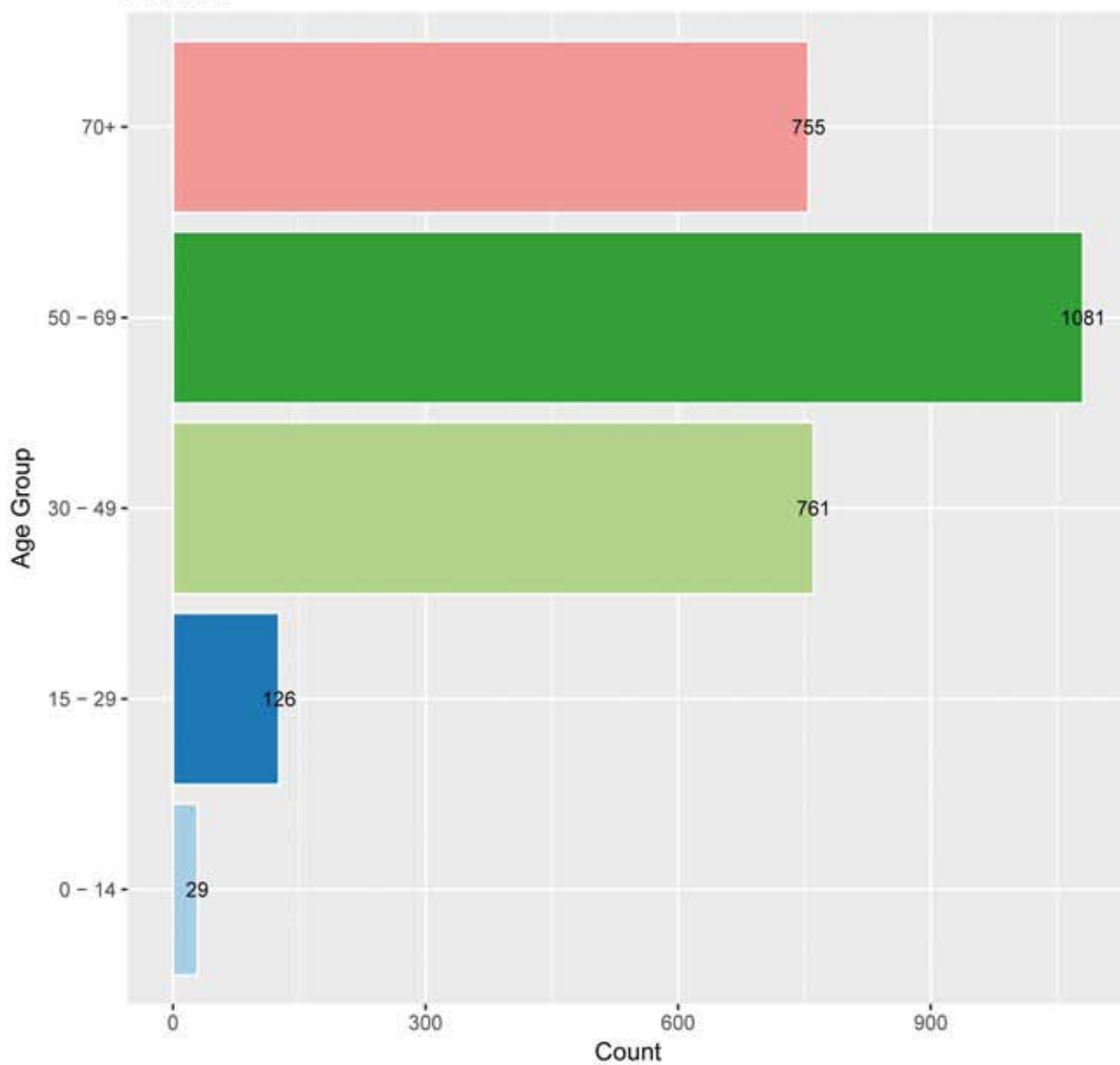


Figure 34.
Tabriz Cancer Registry (1394), excluding C44,
Male

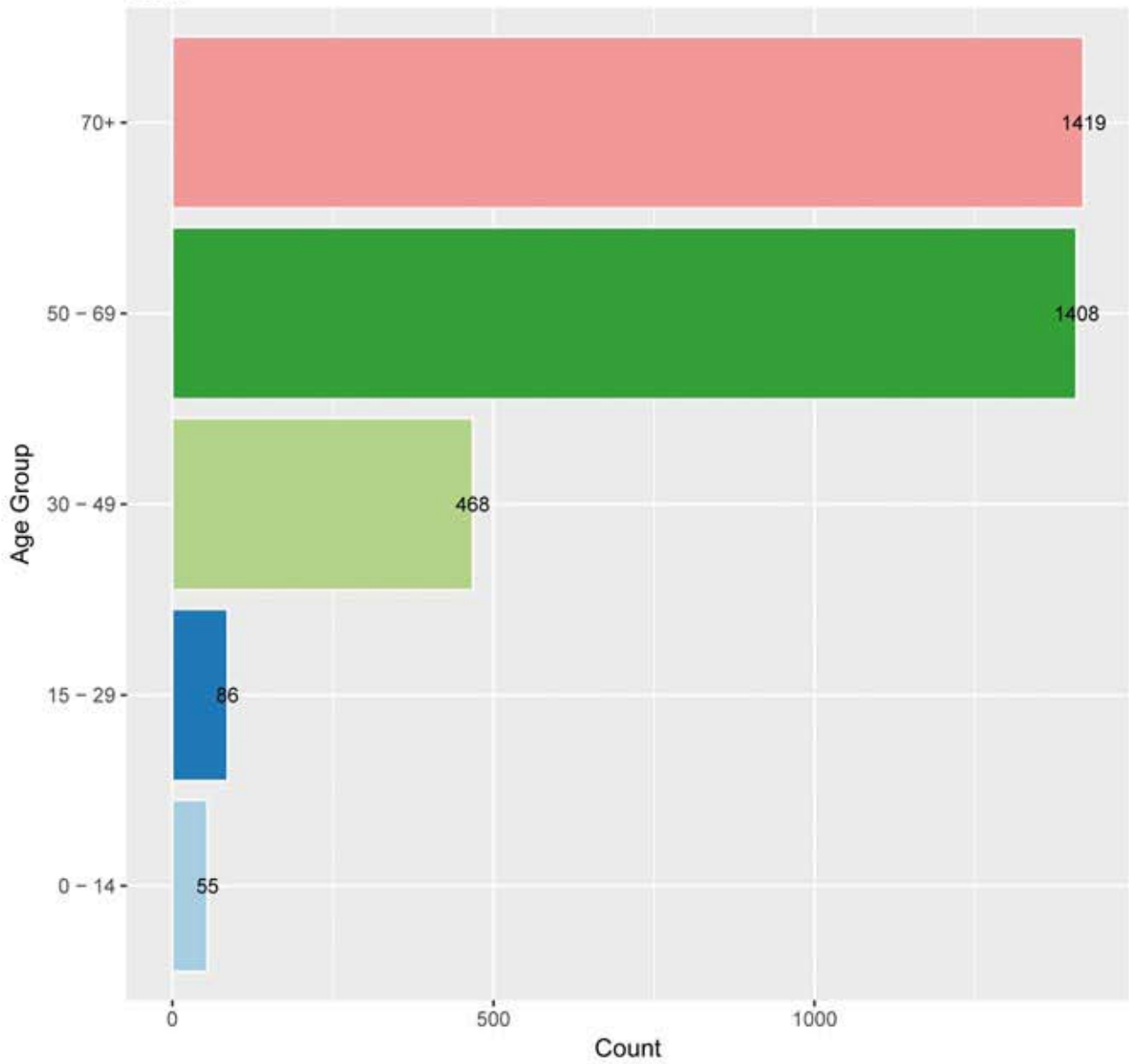


Figure 35.
 Top 10 by CASES,
 Tabriz Cancer Registry (1394), Female

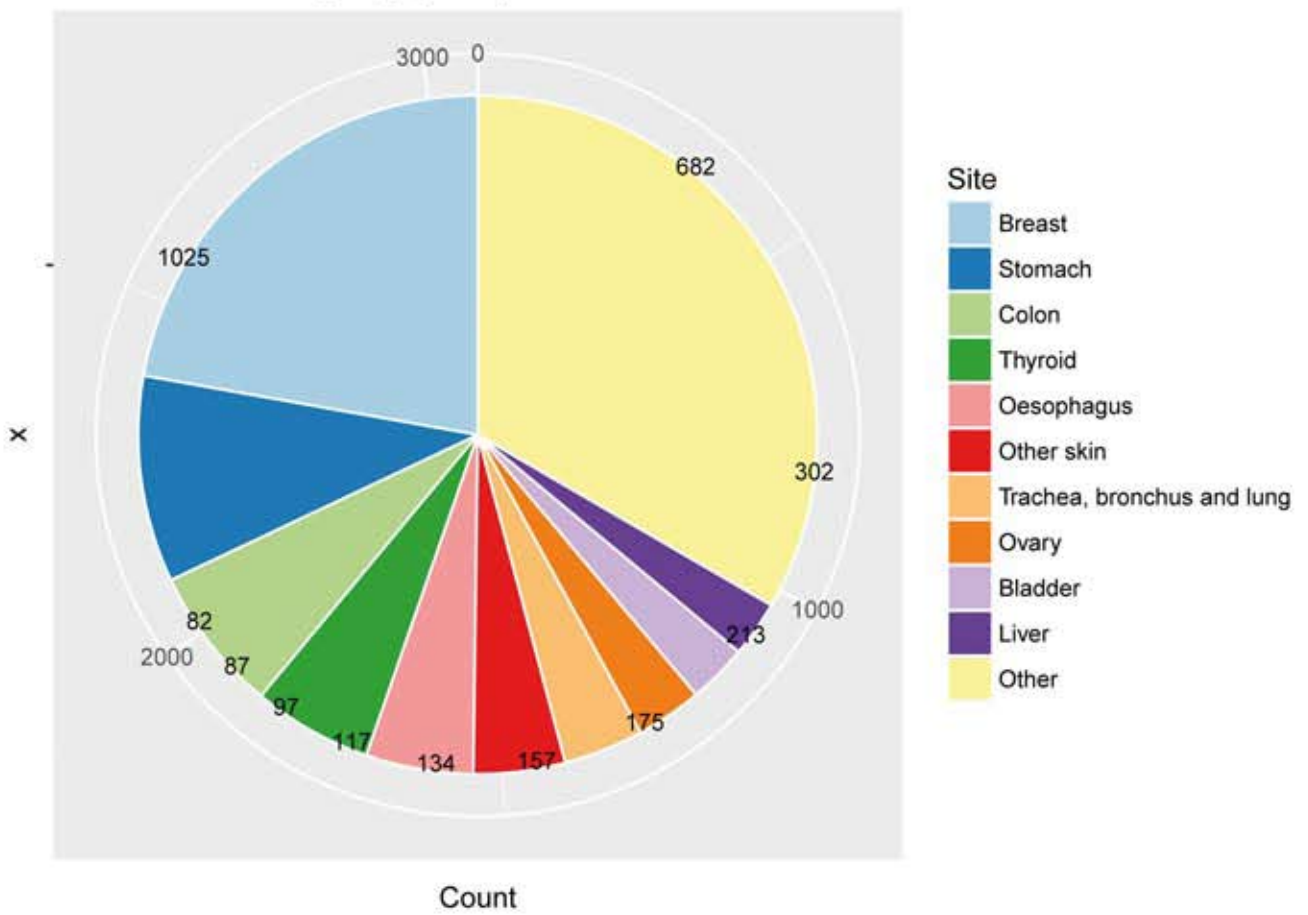


Figure 36.
 Top 10 by CASES,
 Tabriz Cancer Registry (1394), Male

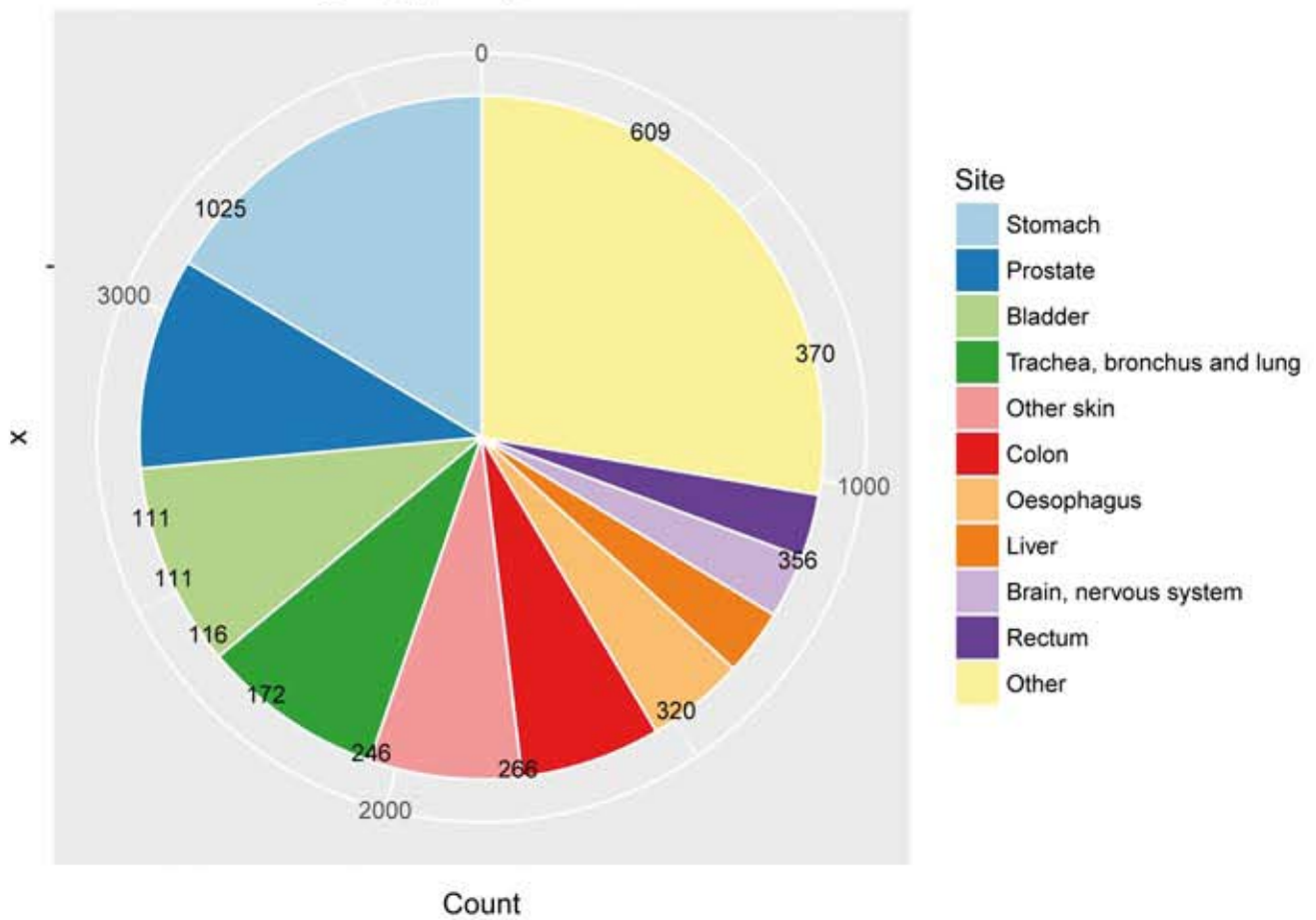


Figure 37.
 Top 10 by CASES,
 Tabriz Cancer Registry (1394), excluding C44, Female

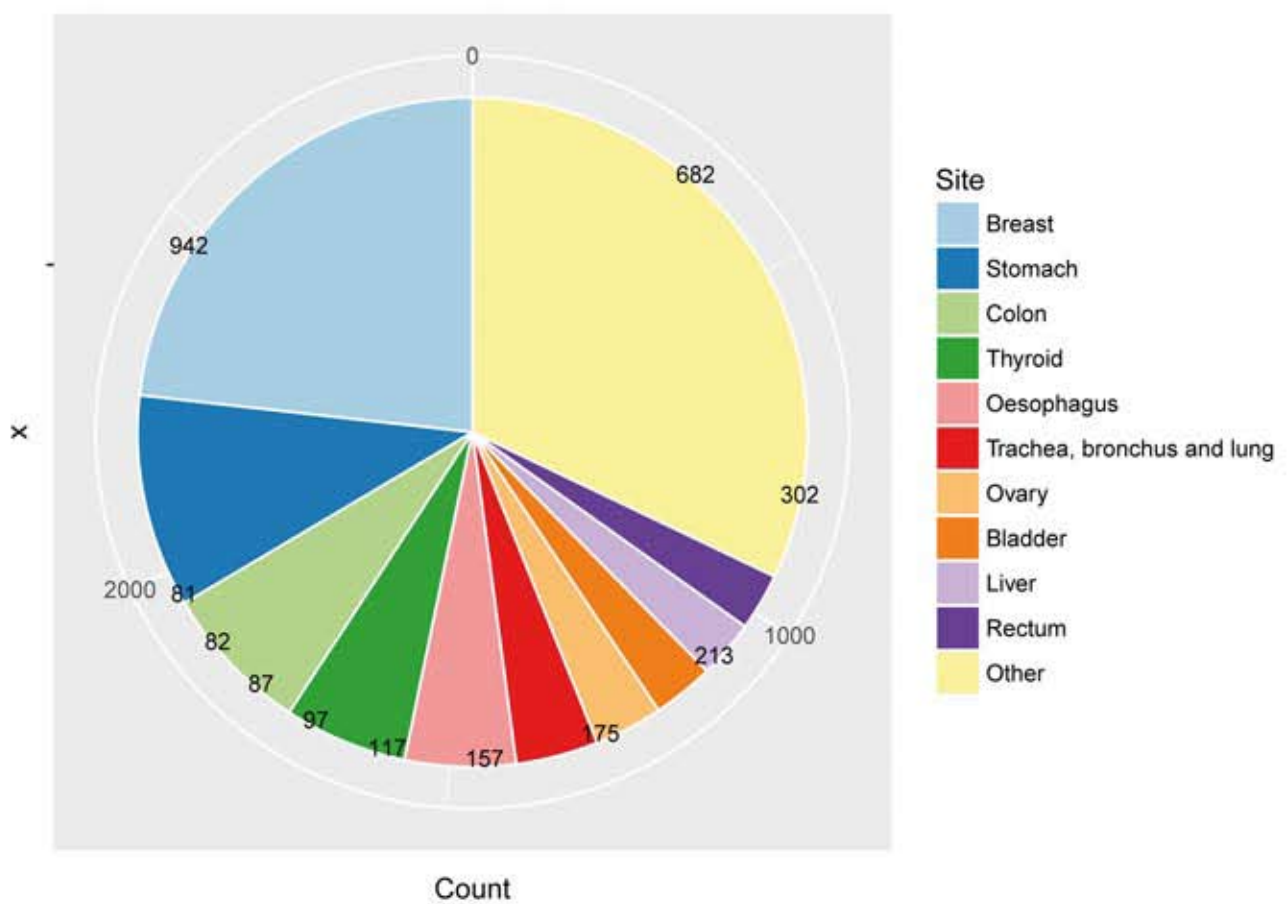


Figure 38.
 Top 10 by CASES,
 Tabriz Cancer Registry (1394), excluding C44, Male

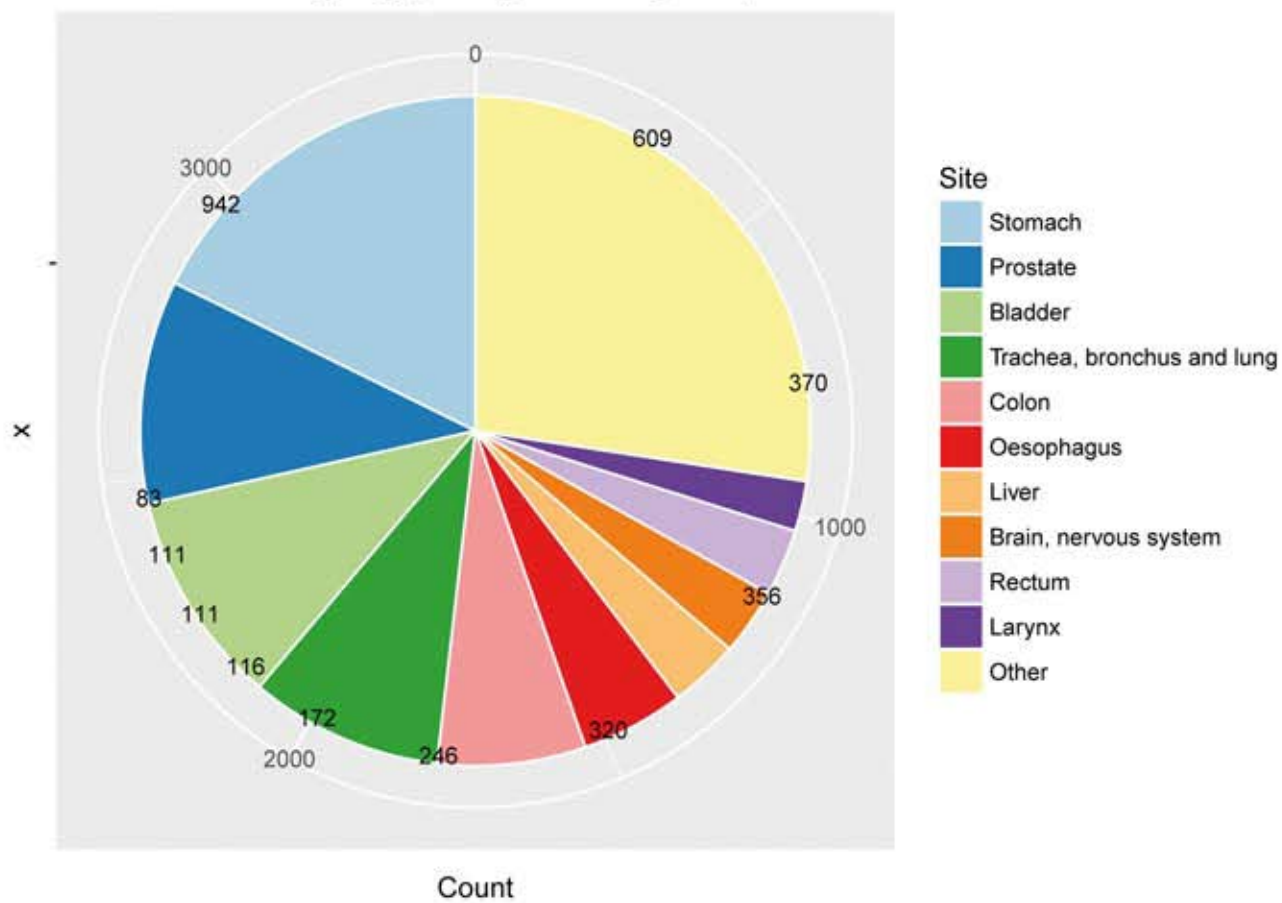


Figure 39.
Tabriz Cancer Registry (1394),
Female

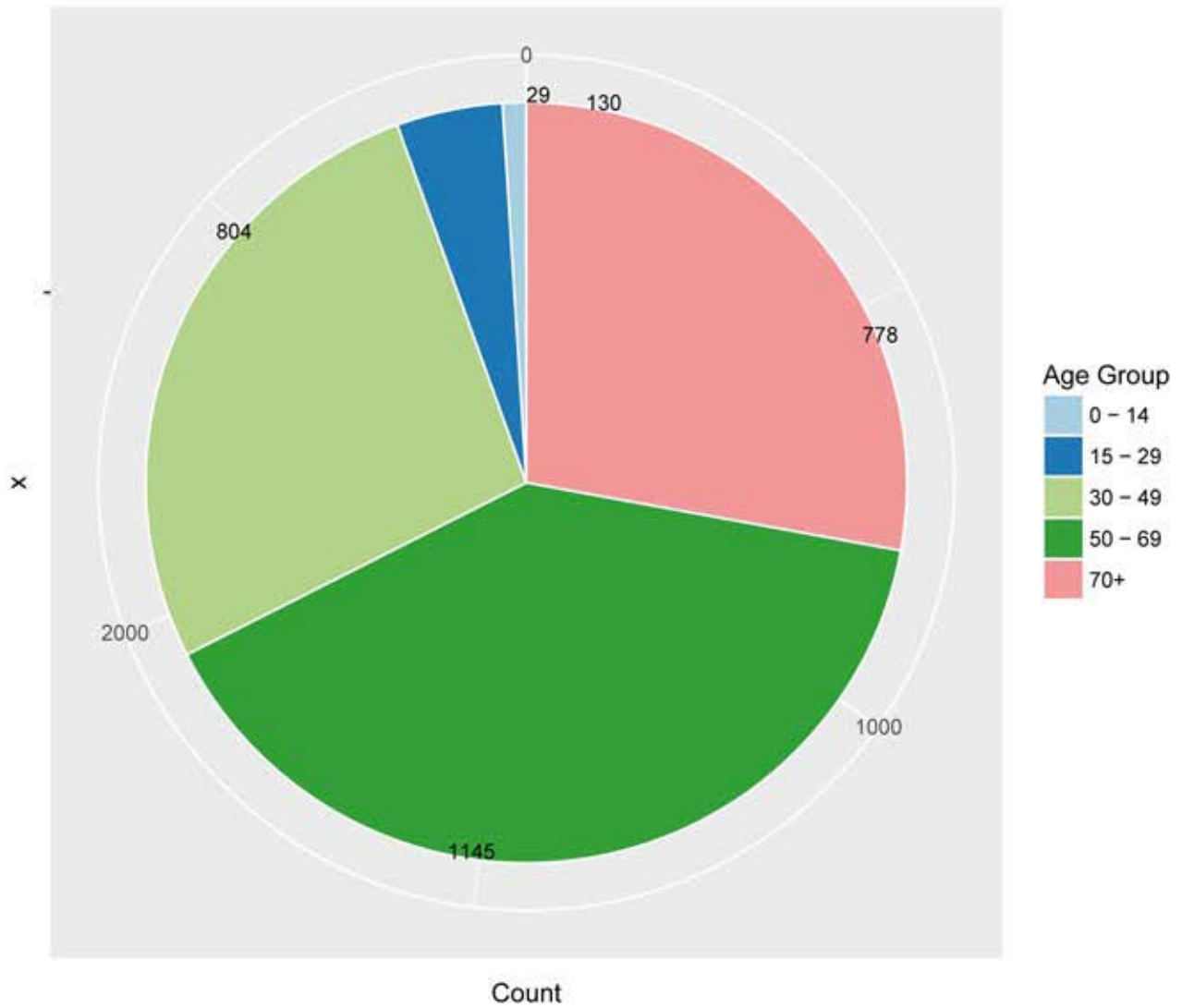


Figure 40.
Tabriz Cancer Registry (1394),
Male

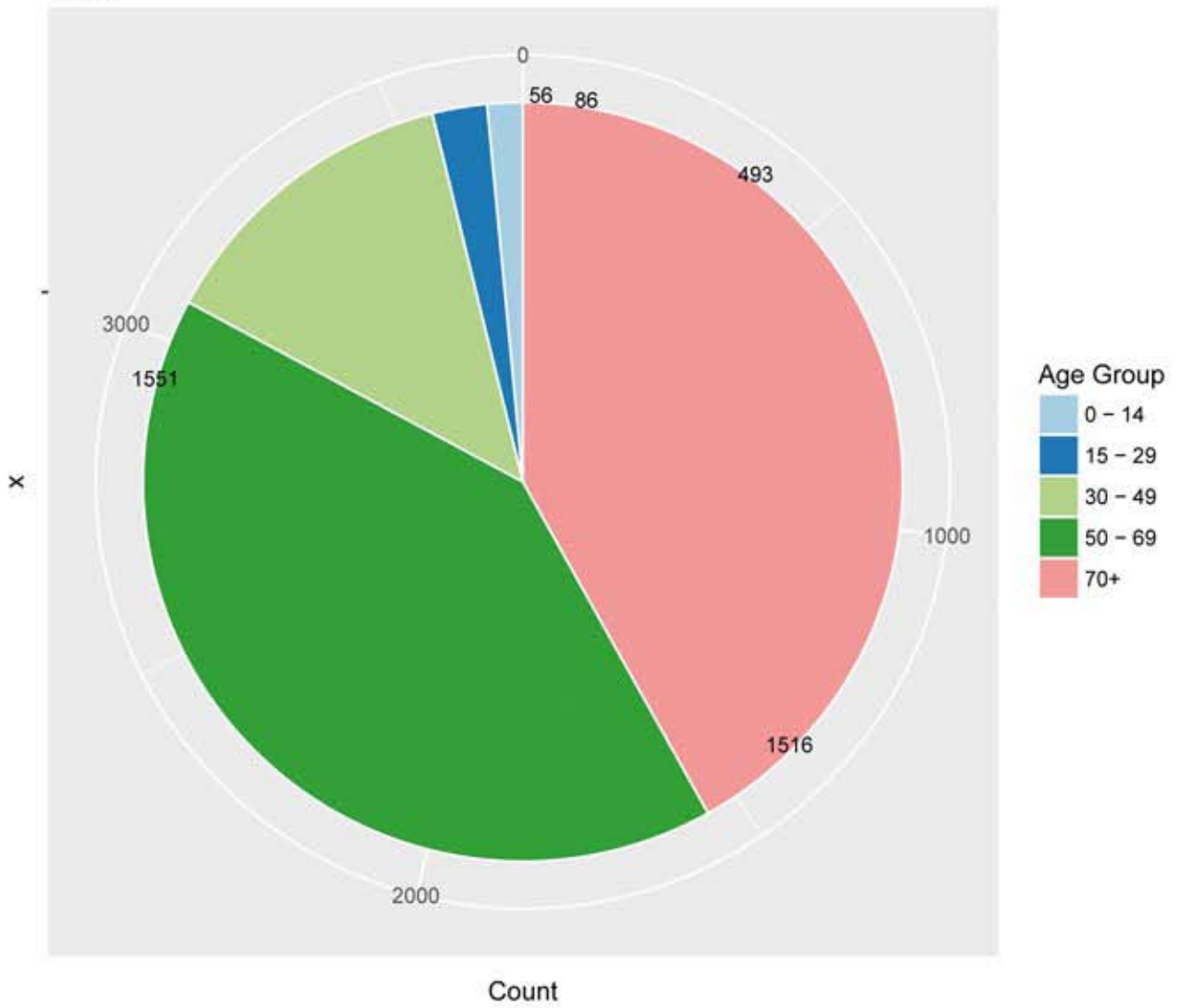


Figure 41.

Tabriz Cancer Registry (1394), excluding C44,
Female

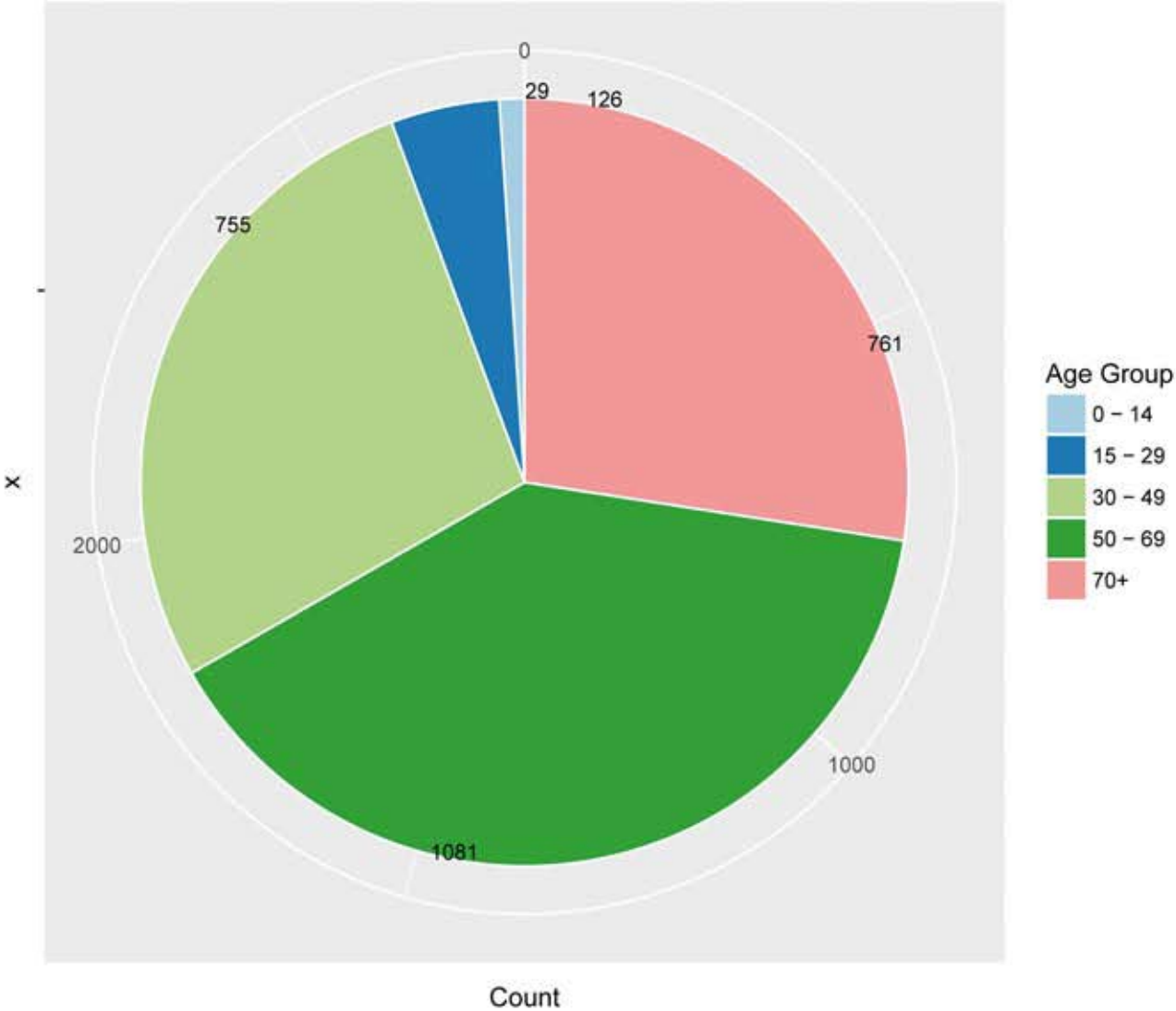
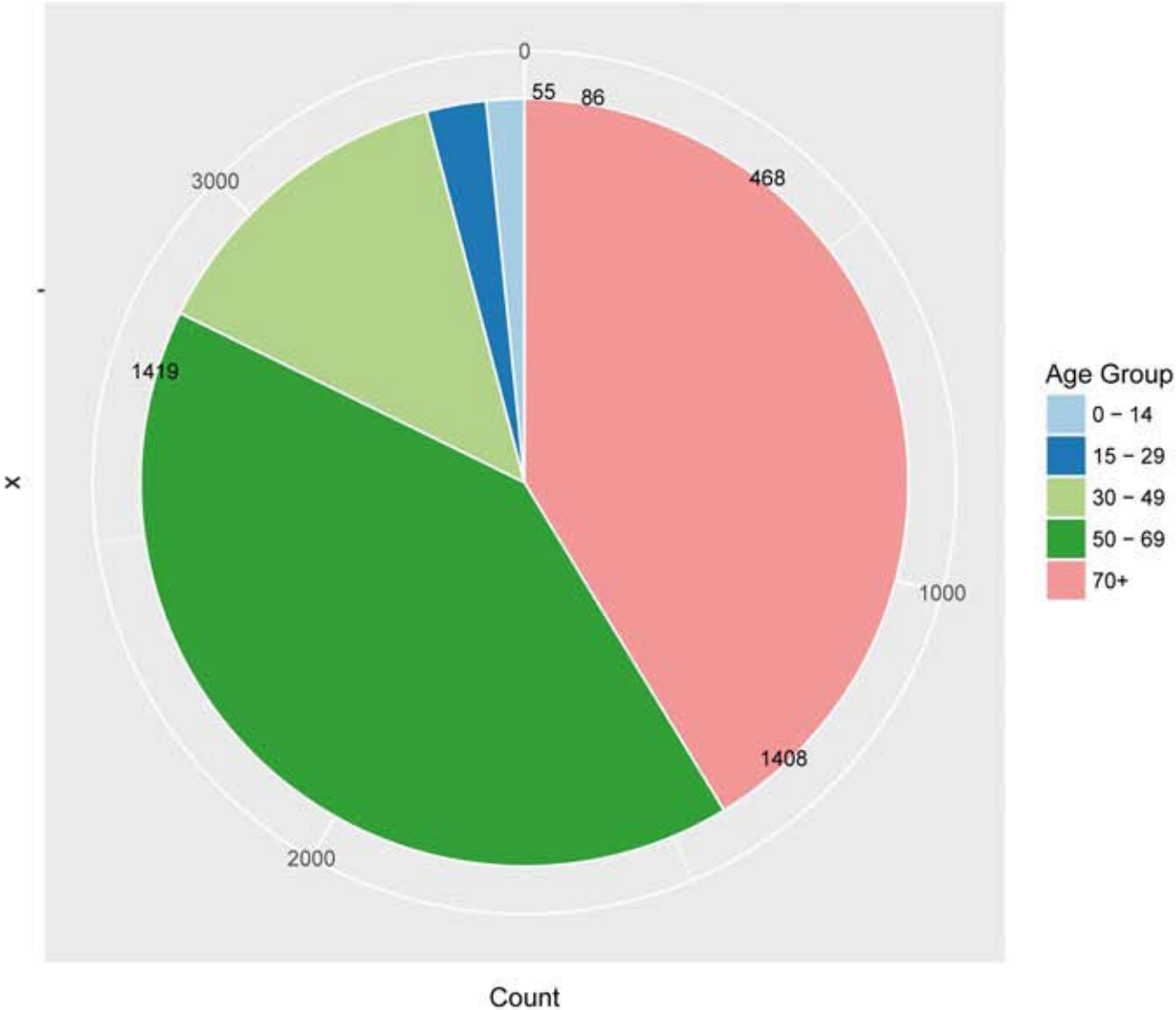
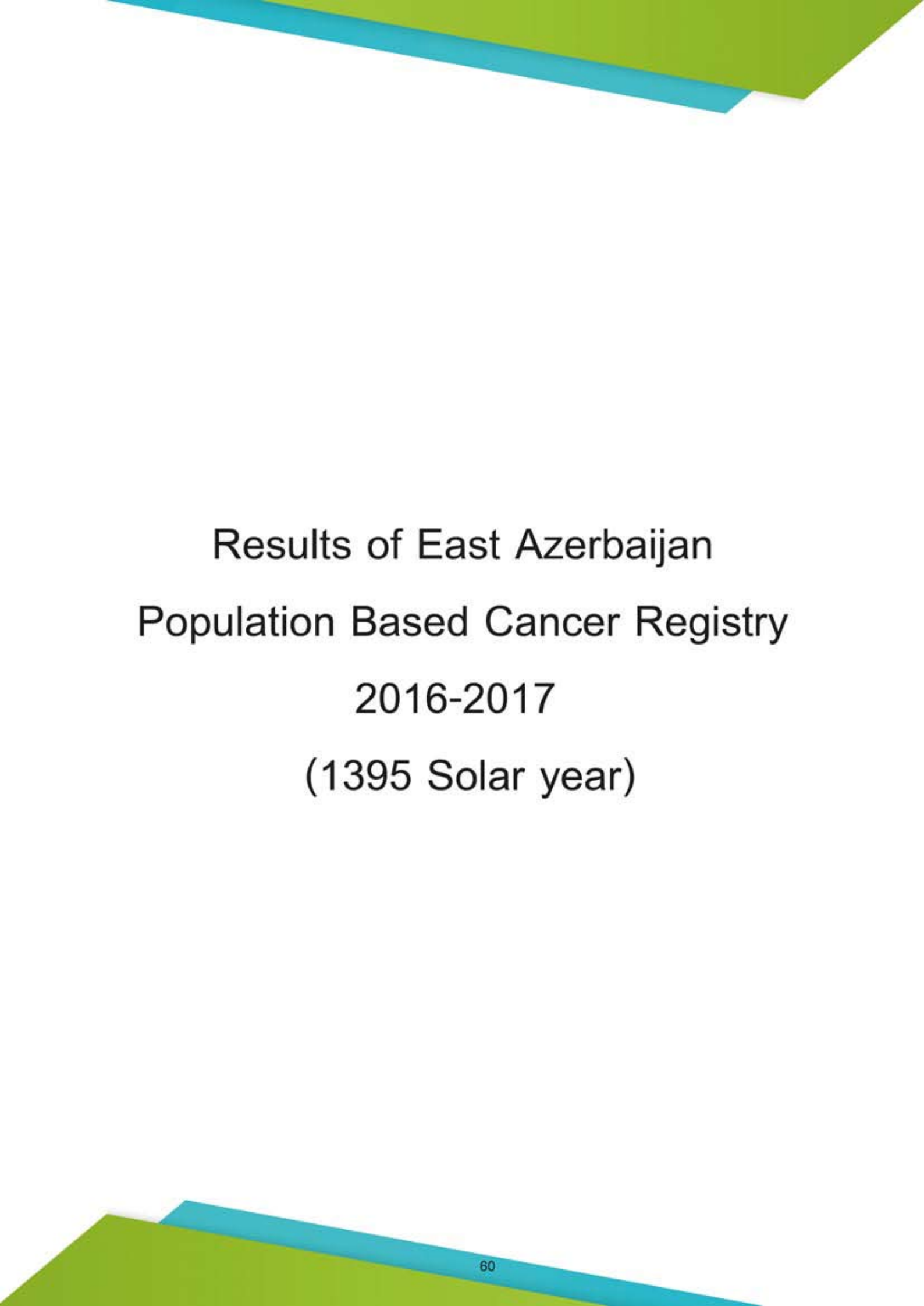


Figure 42.
Tabriz Cancer Registry (1394), excluding C44,
Male





Results of East Azerbaijan
Population Based Cancer Registry
2016-2017
(1395 Solar year)

Study Sample

Figure 45 shows the process and role of different data sources in the EA-PBCR. We merged 5,574 reports from pathology departments with 3,339 reports from the medical records of hospital departments and 3,476 reports from the cause of death registry (n=12,389 cases). After removing 1,207 duplicates and records for patients who were referred from neighboring provinces, we linked the data to the 11,185 cases in the last 4 years pathology-based cancer registry, which led to the removal of additional duplicate records. Finally, we obtained 7353 incident cases for inclusion in the statistical analyses.

Figure 43.
Tabriz Cancer Registry (1395)
Top Cancers (ASR)

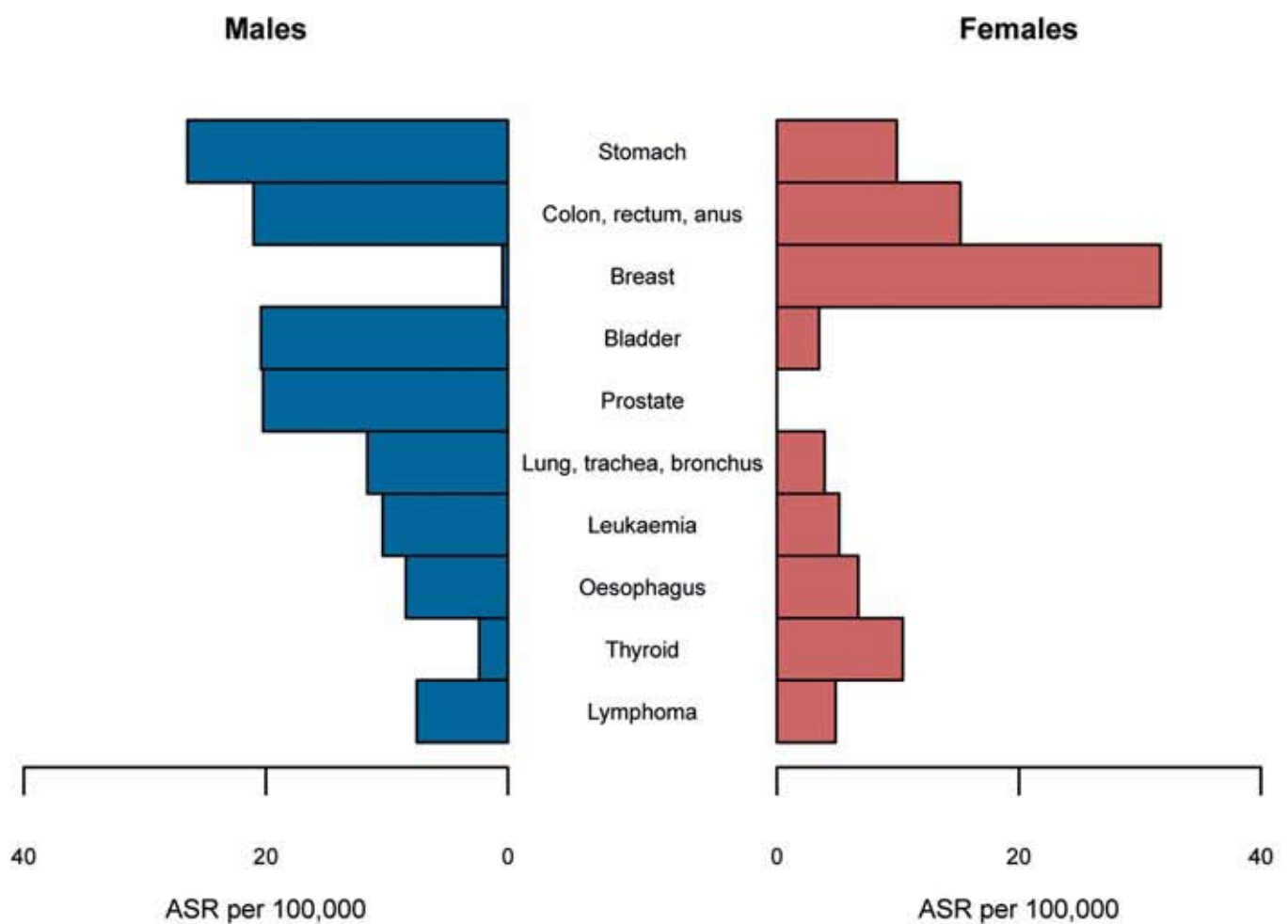


Figure 44.
Tabriz Cancer Registry (1395)
Census1395
Population Pyramids

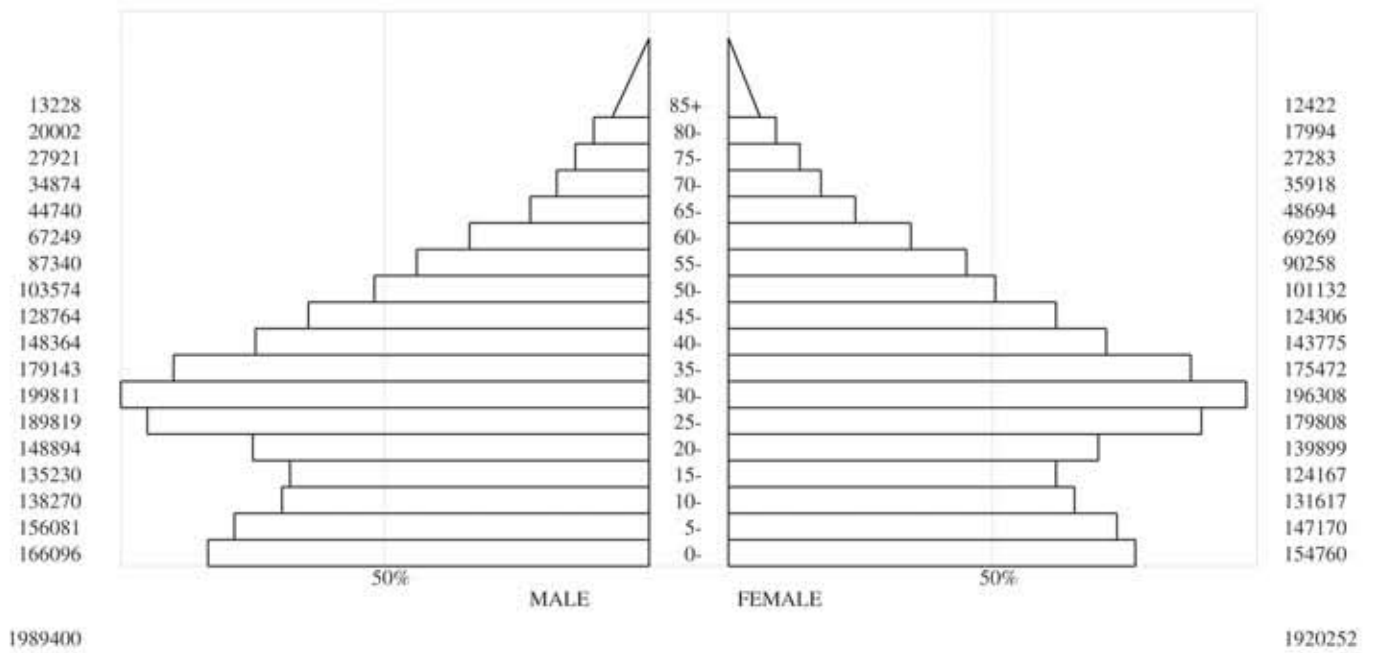
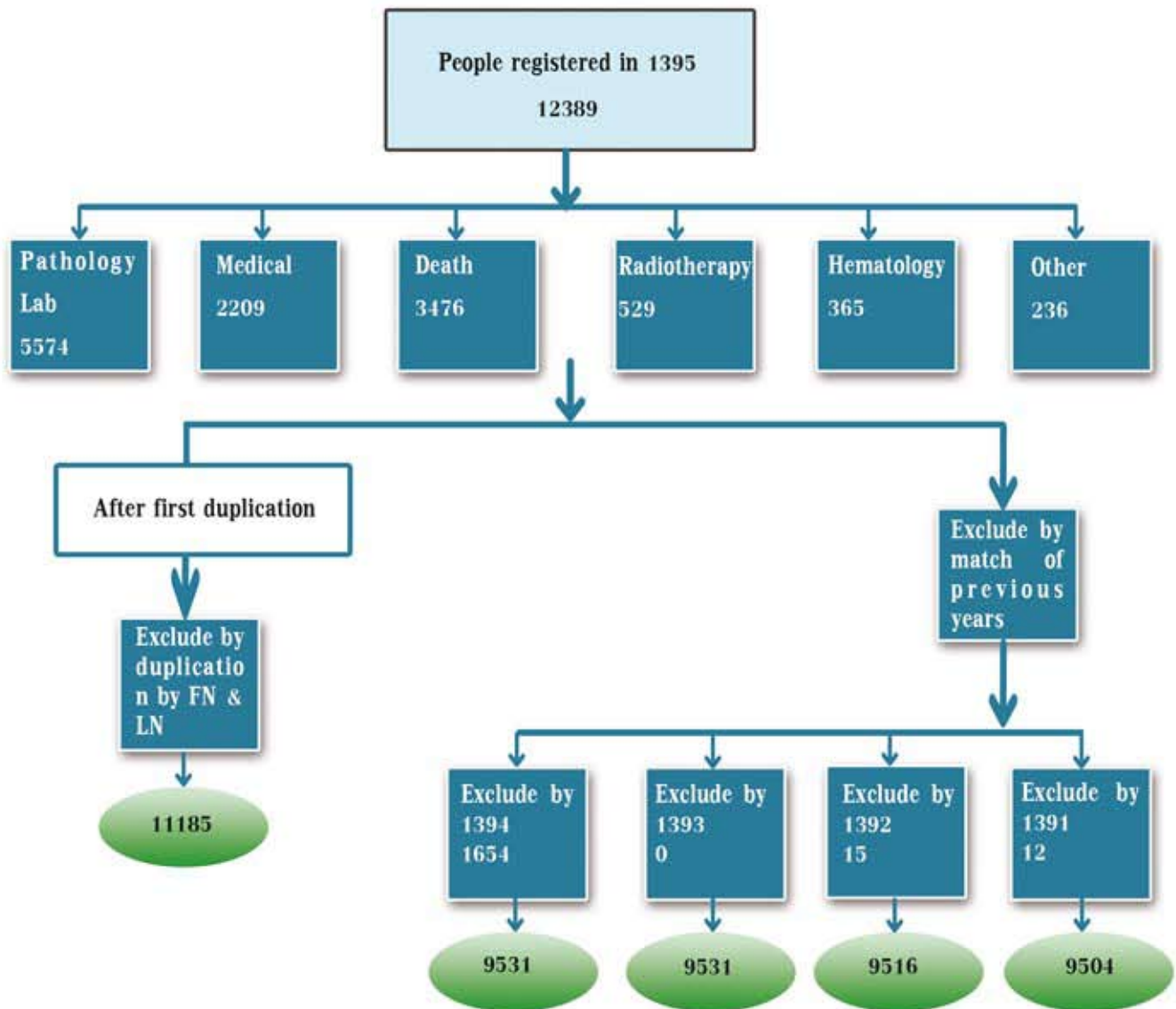
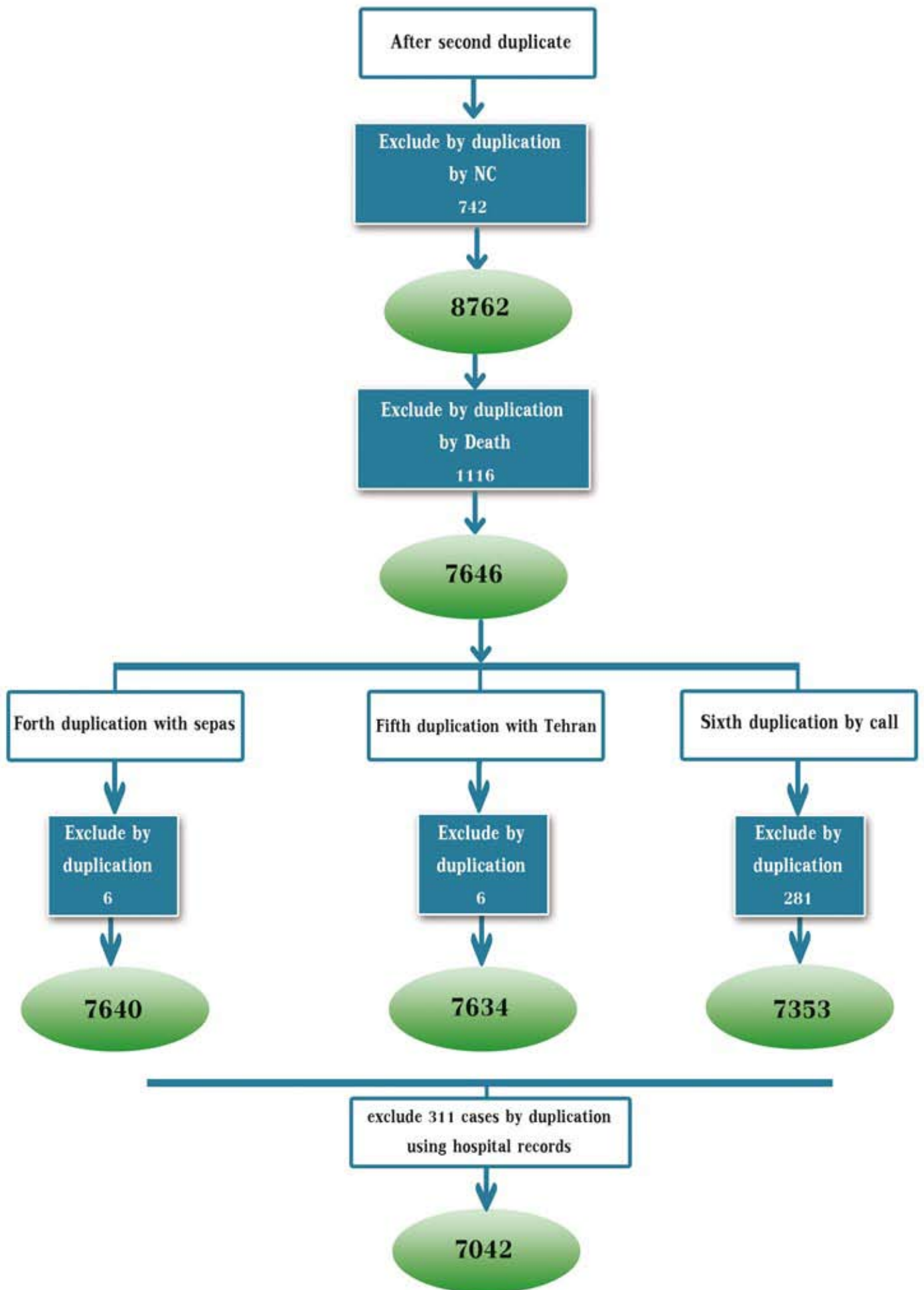


Figure 45.

Data Linkage and Removal of Duplicates and Non0 residents in East Azerbaijan Population Based Cancer Registry (1395)





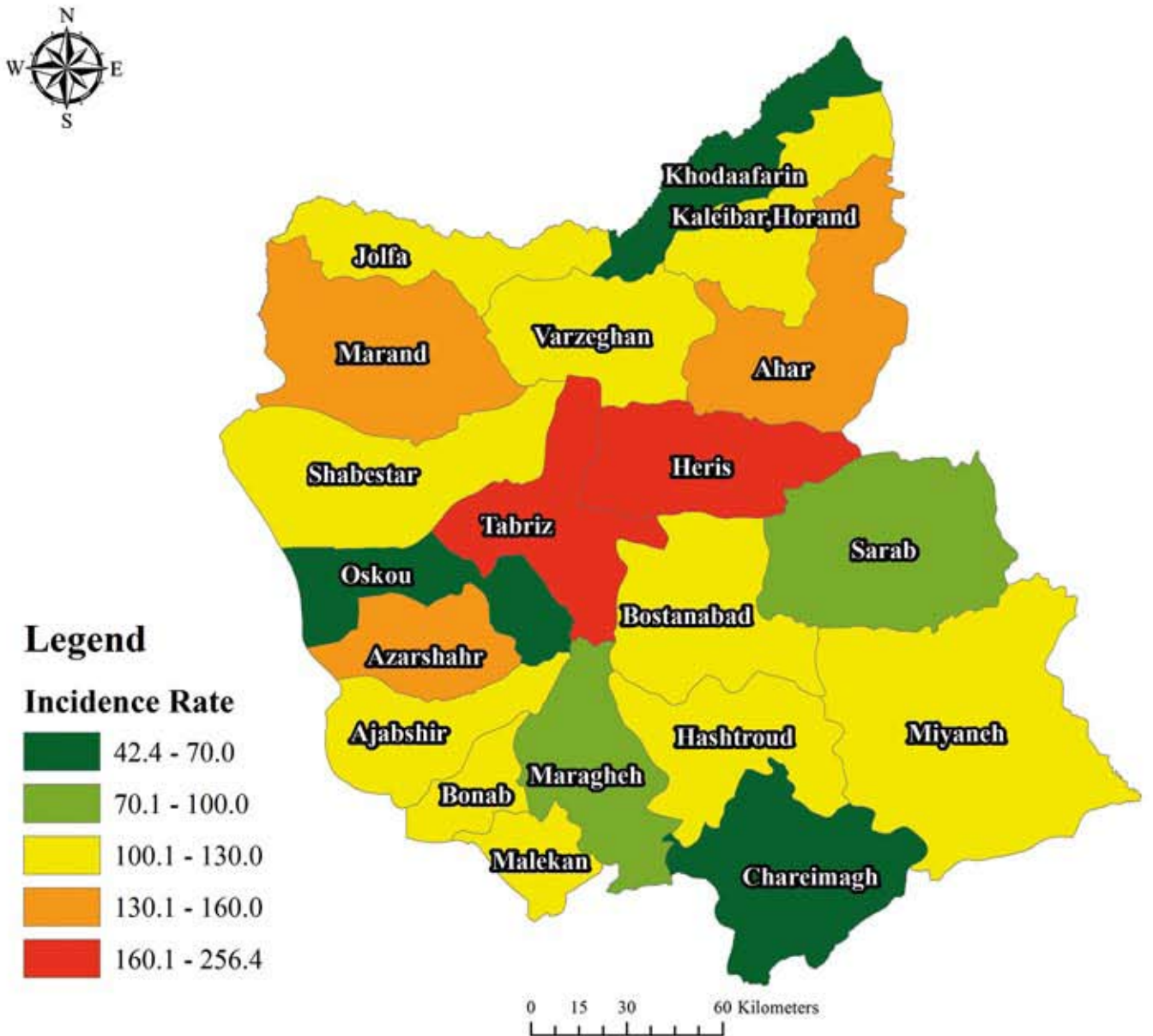
Cancer Incidence

Of the 7042 new cancer cases in one Iranian solar year (March 20th, 2016, and March 19th, 2017), males accounted for 55.6%(3916) and females accounted for 44.4%(3126) and male to female ratio was 1.25. The overall mean age was 59.75 ± 17.85 years, but was 63.02 ± 17.40 years for men and 55.65 ± 17.55 years for women. Except non-melanoma skin cancer (ICD-O3- code C44) the crude incidence rates per 100,000 were 176.6 for men and 151.0 for women. The ASR per 100,000 for all cancers was 169.4 for men, and 136.5 for women. The five most common cancers were stomach (ASR 26.48), colorectal (ASR 21.02), bladder (ASR 20.40), prostate (ASR 20.23), and lung (ASR 11.62) for men and breast (ASR 31.70), colorectal (ASR 15.17), thyroid (ASR 10.41), stomach (ASR 9.91), and esophageal (ASR 6.73) in women, respectively.

Table 12.Number and Crude Incidence Rates of cancers according to cities of EAPBCR in 1395

City	Frequency	Percent	Population	Crude Incidence Rate
Ahar	201	2.9	154530	130.07
Tabriz	4705	66.8	1773033	265.36
Sarab	125	1.8	125341	99.73
Maragheh	198	2.8	262604	75.40
Marand	367	5.2	244971	149.81
Miyaneh	194	2.8	182848	106.10
Hashtroud	68	1.0	57199	118.88
Bonab	141	2.0	134892	104.53
Bostanabad	121	1.7	94769	127.68
Shabestar	141	2.0	135421	104.12
Kaleibar,Horand	50	.7	46125	108.40
Heris	114	1.6	69093	164.10
Jolfa	70	1.0	61358	114.08
Malekan	125	1.8	111319	112.29
Azarshahr	163	2.3	110311	147.76
Oskou	83	1.2	158270	52.44
Chareimagh	14	.2	31071	45.06
Varzeghan	64	.9	52650	121.56
Ajabshir	84	1.2	70852	118.56
Khodaafarin	14	.2	32995	42.43
Total	7042	100.0	3909652	180.12

Figure46. Crude Incidence Rates of all cancer in East Azerbaijan cities (1395)



Data Quality

After rigorous attempts, %66.1 of the cases had microscopic verification, including histology (%64.2) and cytology (%1.9) results. The lowest microscopic verification rates were observed for Pancreasr cancers (%19.12 in men, %24.24 in women) and Liver cancers (%28.79 in men, and 31.91 in women).

Furthermore, we collected %14.4 of reports based on clinical data, including medical records (%14), surgical reports (%0.2) and imaging reports (%0.2). The remaining data were collected from the cause of death registry or autopsy records, producing a final DCO% of %19.5. The highest DCO% was observed for female lung cancer (%48.31), but the DCO% was zero for melanoma and testicular cancer. Although the initial data had a higher DCO%, this decreased from %35 to %19.09 after linkage with different databases, contacting relatives to remove cases diagnosed in previous years, and clarifying the clinical and histological information for %15 of the DCO cases.

Table 13. ASRs for the top ten major cancers in males and females in East Azerbaijan Province in 2016-2017

Male					Female				
Site (ICD-O-3) ¹	No. of Cases	Proportion (%)	CIR ²	ASR ³	Site (ICD-O-3)	No. of Cases	Proportion (%)	CIR	ASR
Stomach (C16)	564	14.40	28.4	26.48	Breast (C50)	691	22.11	36.0	31.70
Colorectal (C18-21)	432	11.03	21.7	21.02	Colorectal (C18-21)	321	10.27	16.7	15.17
Bladder (C67)	424	10.83	21.3	20.40	Thyroid (C73)	230	7.36	12.0	10.41
Prostate (C61)	420	10.73	21.1	20.23	Stomach (C16)	213	6.82	11.1	9.91
Lung (C33-34)	239	6.10	12.0	11.62	Esophagus (C15)	141	4.51	7.3	6.73
Leukemia (C91-95)	206	5.26	10.4	10.34	Corpus and Uterus(C54-55)	133	4.26	6.9	6.37
Esophagus (C15)	175	4.47	8.8	8.44	Ovary (C56)	117	3.74	6.1	5.34
Lymphoma (C81-85,88,90,96)	150	3.83	7.6	7.52	Brain& CNS (C70-72)	102	3.26	5.3	4.93
Brain& CNS (C70-72)	117	2.99	5.9	5.54	Leukemia (C91-95)	99	3.17	5.1	5.16
Liver (C22)	66	1.69	3.3	3.01	Lymphoma (C81-85,88,90,96)	98	3.14	5.1	4.86

¹ International Classification of Diseases for Oncology Third Edition code

² Crude Incidence Rate

³ Age-standardized Incidence Rate

Table 14.
Tabriz Cancer Registry (1395)
 Data Quality Indicators

MALE

SITE	Cases	% Total	ASR(se)	MV(%)	CLIN(%)	DCO(%)	ICD10
Mouth & pharynx	82	2.09	3.82 (0.43)	79.27	12.20	8.54	C00-14
Oesophagus	175	4.47	8.44 (0.66)	78.29	5.14	16.57	C15
Stomach	564	14.40	26.48 (1.16)	69.68	9.75	20.57	C16
Colon, rectum, anus	432	11.03	21.02 (1.04)	75.23	10.42	14.35	C18-21
Liver	66	1.69	3.01 (0.39)	28.79	39.39	31.82	C22
Pancreas	68	1.74	3.20 (0.40)	19.12	45.59	35.29	C25
Larynx	72	1.84	3.68 (0.44)	79.17	11.11	9.72	C32
Lung, trachea, bronchus	239	6.10	11.62 (0.78)	63.18	21.34	15.48	C33-34
Pleura & other thoracic	36	0.92	1.73 (0.30)	66.67	13.89	19.44	C37-38
Melanoma of skin	23	0.59	0.96 (0.21)	69.57	30.43	0.00	C43
Prostate	420	10.73	20.23 (1.03)	76.67	6.90	16.43	C61
Testis	28	0.72	1.22 (0.24)	71.43	25.00	3.57	C62
Kidney & urinary NOS	93	2.37	4.79 (0.51)	81.72	8.60	9.68	C64-66,68
Bladder	424	10.83	20.40 (1.03)	87.50	8.02	4.48	C67
Brain & nervous sytem	117	2.99	5.54 (0.53)	57.26	18.80	23.93	C70-72
Thyroid	52	1.33	2.38 (0.34)	75.00	21.15	3.85	C73
Ill-defined	27	0.69	1.27 (0.25)	51.85	33.33	14.81	C76-80
Lymphoma	150	3.83	7.52 (0.63)	63.33	16.67	20.00	C81-85,90,88,96
Leukaemia	206	5.26	10.34 (0.75)	65.05	15.05	19.90	C91-95
All sites but C44	3513	89.71	169.38 (2.96)	70.77	13.61	15.63	ALLbC44

FEMALE

SITE	Cases	% Total	ASR(se)	MV(%)	CLIN(%)	DCO(%)	ICD10
Mouth & pharynx	57	1.82	2.76 (0.37)	87.72	7.02	5.26	C00-14
Oesophagus	141	4.51	6.73 (0.58)	72.34	14.18	13.48	C15
Stomach	213	6.82	9.91 (0.70)	62.91	9.39	27.70	C16
Colon, rectum, anus	321	10.27	15.17 (0.87)	69.78	9.97	20.25	C18-21
Liver	47	1.50	2.22 (0.34)	31.91	40.43	27.66	C22
Pancreas	33	1.06	1.47 (0.26)	24.24	45.45	30.30	C25
Larynx	10	0.32	0.50 (0.16)	50.00	10.00	40.00	C32
Lung, trachea, bronchus	84	2.69	3.95 (0.44)	67.86	4.76	27.38	C33-34
Pleura & other thoracic	32	1.02	1.49 (0.27)	68.75	3.12	28.12	C37-38
Melanoma of skin	21	0.67	1.01 (0.23)	71.43	28.57	0.00	C43
Breast	691	22.11	31.70 (1.23)	79.59	10.85	9.55	C50
Cervix	92	2.94	4.16 (0.44)	83.70	7.61	8.70	C53
Corpus & Uterus NOS	133	4.26	6.37 (0.56)	79.70	15.04	5.26	C54-55
Ovary & adnexa	117	3.74	5.34 (0.51)	60.68	27.35	11.97	C56
Kidney & urinary NOS	52	1.66	2.55 (0.36)	84.62	7.69	7.69	C64-66,68
Bladder	75	2.40	3.49 (0.41)	86.67	5.33	8.00	C67
Brain & nervous sytem	102	3.26	4.93 (0.50)	46.08	24.51	29.41	C70-72
Thyroid	230	7.36	10.41 (0.70)	78.70	20.43	0.87	C73
Ill-defined	36	1.15	1.88 (0.32)	63.89	25.00	11.11	C76-80
Lymphoma	98	3.14	4.86 (0.51)	69.39	17.35	13.27	C81-85,90,88,96
Leukaemia	99	3.17	5.16 (0.54)	55.56	20.20	24.24	C91-95
All sites but C44	2899	92.77	136.52 (2.60)	70.99	15.04	13.97	ALLbC44

Cases of unknown age (0 M / 0 F) were excluded from these analyses

Table 15.

Tabriz Cancer Registry (1395)

Number of cases in major diagnosis groups in single calendar years of observation

MALES

SITE	1395
Lip, oral cavity and pharynx (C14-00)	82 (2.3)
Digestive organs (C26-15)	1370 (39)
Respiratory organs (C39-30)	359 (10.2)
Bone, cartilage, melanoma (C43-40)	73 (2.1)
Male genital (C63-60)	449 (12.8)
Urinary organs (C68-64)	517 (14.7)
Eye, brain, thyroid etc. (C75-69)	197 (5.6)
Haematopoietic (C96-81)	356 (10.1)
Other and unspecified (O&U)	99 (2.8)
All sites but C44 (ALLbC44)	3513 (100)

FEMALES

SITE	1395
Lip, oral cavity and pharynx (C14-00)	57 (2)
Digestive organs (C26-15)	830 (28.6)
Respiratory organs (C39-30)	136 (4.7)
Bone, cartilage, melanoma (C43-40)	51 (1.8)
Breast (C50)	691 (23.8)
Female genital (C58-51)	354 (12.2)
Urinary organs (C68-64)	127 (4.4)
Eye, brain, thyroid etc. (C75-69)	346 (11.9)
Haematopoietic (C96-81)	197 (6.8)
Other and unspecified (O&U)	110 (3.8)
All sites but C44 (ALLbC44)	2899 (100)

BOTH SEXES

SITE	1395
Lip, oral cavity and pharynx (C14-00)	139 (2.2)
Digestive organs (C26-15)	2200 (34.3)
Respiratory organs (C39-30)	495 (7.7)
Bone, cartilage, melanoma (C43-40)	124 (1.9)
Breast (C50)	702 (10.9)
Female genital (C58-51)	354 (5.5)
Male genital (C63-60)	449 (7)
Urinary organs (C68-64)	664 (10)
Eye, brain, thyroid etc. (C75-69)	543 (8.5)
Haematopoietic (C96-81)	553 (8.6)
Other and unspecified (O&U)	209 (3.3)
All sites but C44 (ALLbC44)	6414 (100)

Table 16.

Tabriz Cancer Registry (1395)

ASR in major diagnosis groups in single calendar years of observation

MALES

SITE	1395
Lip, oral cavity and pharynx (C14-00)	3.82 (2.3)
Digestive organs (C26-15)	65.37 (38.61)
Respiratory organs (C39-30)	17.56 (10.4)
Bone, cartilage, melanoma (C43-40)	3.6 (2.1)
Male genital (C63-60)	21.5 (12.7)
Urinary organs (C68-64)	25.18 (14.9)
Eye, brain, thyroid etc. (C75-69)	9.26 (5.5)
Haematopoietic (C96-81)	17.87 (10.6)
Other and unspecified (O&U)	4.78 (2.8)
All sites but C44 (ALLbC44)	169.38 (100)

FEMALES

SITE	1395
Lip, oral cavity and pharynx (C14-00)	2.76 (2)
Digestive organs (C26-15)	39.07 (28.6)
Respiratory organs (C39-30)	6.4 (4.7)
Bone, cartilage, melanoma (C43-40)	2.47 (1.8)
Breast (C50)	31.7 (23.2)
Female genital (C58-51)	16.41 (12)
Urinary organs (C68-64)	6.04 (4.4)
Eye, brain, thyroid etc. (C75-69)	16.17 (11.8)
Haematopoietic (C96-81)	10.02 (7.3)
Other and unspecified (O&U)	5.49 (4)
All sites but C44 (ALLbC44)	136.52 (100)

BOTH SEXES

SITE	1395
Lip, oral cavity and pharynx (C14-00)	3.3 (2.2)
Digestive organs (C26-15)	52.1 (34.1)
Respiratory organs (C39-30)	11.93 (7.8)
Bone, cartilage, melanoma (C43-40)	3.05 (2)
Breast (C50)	16.05 (10.5)
Female genital (C58-51)	8.2 (5.4)
Male genital (C63-60)	10.68 (7)
Urinary organs (C68-64)	15.52(10.2)
Eye, brain, thyroid etc. (C75-69)	12.67 (8.3)
Haematopoietic (C96-81)	13.96 (9.1)
Other and unspecified (O&U)	5.13 (3.4)
All sites but C44 (ALLbC44)	152.58 (100)

Table 18.
Tabriz Cancer Registry (1395)

Census1395

Cases by age group (Period) - Male

S I T E	ALL AGE AGES UNK	0-	5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+	(%)	ICD (10th)
Lip	17	0	-	-	-	1	1	-	-	2	2	2	2	3	2	2	1	1	1	0.5	C00
Tongue	20	0	-	-	-	1	1	-	1	2	2	1	2	3	2	2	2	1	1	0.6	C01-02
Mouth	8	0	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	4	0.2	C03-06
Salivary glands	15	0	-	-	-	1	1	-	1	1	-	2	1	-	2	1	2	-	-	0.4	C07-08
Tonsil	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	C09
Other oropharynx	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C10
Nasopharynx	12	0	-	-	-	-	-	-	3	1	4	1	1	1	1	-	-	-	-	0.3	C11
Hypopharynx	6	0	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	0.2	C12-13
Pharynx unspecified	1	0	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	0.0	C14
Oesophagus	175	0	-	-	-	-	-	-	1	4	8	12	17	20	28	26	24	18	17	5.0	C15
Stomach	564	0	1	-	-	1	-	4	5	12	21	38	53	66	73	83	83	70	54	16.1	C16
Small intestine	37	0	-	-	-	1	1	1	1	1	4	4	4	6	8	-	1	5	2	1.1	C17
Colon	288	0	-	-	-	2	1	3	8	11	18	28	27	28	47	44	31	21	19	8.2	C18
Rectum	134	0	-	-	-	-	-	2	8	4	15	18	20	18	18	9	14	5	3	3.8	C19-20
Anus	10	0	-	-	-	-	-	-	-	1	2	2	2	1	1	1	2	1	-	0.3	C21
Liver	66	0	3	-	-	1	-	1	-	2	2	6	7	6	6	3	12	11	1	1.9	C22
Gallbladder etc.	16	0	-	-	-	1	-	1	1	1	1	2	-	2	3	3	1	1	1	0.5	C23-24
Pancreas	68	0	-	-	-	-	-	-	-	2	3	1	9	6	11	10	13	8	5	1.9	C25
Nose, sinuses etc.	6	0	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	2	-	0.2	C30-31
Larynx	72	0	-	-	-	-	-	-	-	-	6	6	14	13	10	12	-	5	1	2.0	C32
Trachea, bronchus and lung	239	0	-	-	-	3	3	1	11	11	14	37	32	32	36	30	19	10	10	6.8	C33-34
Other thoracic organs	36	0	1	-	-	2	-	2	5	1	1	1	1	4	3	6	3	4	4	1.0	C37-38
Bone	50	0	1	1	2	7	8	3	2	1	2	2	5	4	4	2	2	1	3	1.4	C40-41
Melanoma of skin	23	0	-	-	-	-	-	1	1	1	1	1	4	1	2	2	4	5	-	0.7	C43
Other skin	403	0	-	-	-	-	1	3	9	10	15	17	43	50	52	57	56	55	34	11.5	C44
Mesothelioma	2	0	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	0.1	C45
Kaposi sarcoma	3	0	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	0.1	C46
Connective and soft tissue	56	0	2	1	5	1	4	3	8	2	6	3	4	4	3	1	3	1	1	1.6	C47,C49
Breast	11	0	-	-	-	-	-	1	-	1	1	2	2	-	-	-	2	1	1	0.3	C50
Penis	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C60
Prostate	420	0	-	-	-	-	-	-	-	1	4	15	38	61	61	78	70	50	42	12.0	C61
Testis	28	0	2	1	5	3	5	3	6	2	3	1	-	-	1	-	1	-	1	0.8	C62
Other male genital organs	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C63
Kidney	84	0	3	-	-	-	1	-	3	5	6	11	13	12	14	9	6	1	-	2.4	C64
Renal pelvis	5	0	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	1	-	0.1	C65
Ureter	2	0	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	0.1	C66
Bladder	424	0	-	-	-	1	4	6	6	10	18	44	41	59	63	52	45	48	27	12.1	C67
Other urinary organs	2	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	0.1	C68
Eye	16	0	-	-	-	-	-	-	-	1	-	1	1	1	1	4	1	3	4	0.5	C69
Brain, nervous system	117	0	5	3	2	2	7	12	11	6	8	9	16	10	12	2	3	6	7	3.3	C70-72
Thyroid	52	0	-	-	1	-	-	6	6	6	8	9	3	5	4	2	1	1	-	1.5	C73
Adrenal gland	8	0	2	-	-	-	-	-	-	-	-	-	-	1	2	1	2	-	-	0.2	C74
Other endocrine	4	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	0.1	C75
Hodgkin disease	47	0	-	4	4	2	6	3	3	3	6	2	3	4	4	-	-	1	1	1.3	C81
Non-Hodgkin lymphoma	56	0	2	2	2	-	4	2	4	1	6	4	7	6	1	5	4	1	3	1.6	C82-85,C96
Immunoproliferative diseases	47	0	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	0.0	C88
Multiple myeloma	4	0	-	-	-	-	-	-	-	1	2	4	4	6	3	8	9	7	-	1.3	C90
Lymphoid leukaemia	93	0	10	7	3	3	3	3	3	3	7	6	5	7	7	9	6	5	3	2.6	C91
Myeloid leukaemia	79	0	1	-	4	4	9	4	6	6	4	4	6	7	7	1	4	3	2	2.2	C92-94
Leukaemia unspecified	34	0	-	-	3	2	-	1	2	-	3	-	3	5	4	3	2	4	2	1.0	C95
Myeloproliferative disorders	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	MPD
Myelodysplastic syndromes	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	MDS
Other and unspecified	56	0	2	1	1	2	1	1	3	4	3	4	6	8	3	7	3	6	2	1.6	O&U
All sites	3916	0	34	19	25	29	42	58	67	106	121	207	275	410	463	503	488	439	368	262	ALL
All sites but C44	3513	0	34	19	24	29	42	57	64	97	111	192	258	367	413	451	431	383	313	228	ALLbc44
																				100.0	

Table 19.
Tabriz Cancer Registry (1395)
Census1395
Incidence per 100,000 by age group (Period) - Female

SITE	ALL AGE AGES UNK	Incidence per 100,000 by age group (Period) - Female										CRUDE RATE	CUM CUM ASR		ICD (10th)											
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49		50-54	55-59		60-64	65-69	70-74	75-79	80-84	85+					
Lip	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	0.00	0.01	0.1	C00
Tongue	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	0.9	0.04	0.20	1.3	C01-02
Mouth	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.3	0.03	0.03	0.4	C03-06
Salivary glands	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.2	0.01	0.03	0.3	C07-08
Tonsil	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C09
Other oropharynx	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.00	0.01	0.1	C10
Nasopharynx	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.2	0.01	0.04	0.3	C11
Hypopharynx	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	0.00	0.04	0.2	C12-13
Pharynx unspecified	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	0.01	0.01	0.1	C14
Oesophagus	141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	4.9	0.37	0.82	6.7	C15
Stomach	213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.1	7.3	0.46	1.15	9.9	C16
Small intestine	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	1.3	0.12	0.25	1.9	C17
Colon	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.0	7.3	0.52	1.17	9.9	C18
Rectum	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.2	3.4	0.28	0.61	4.9	C19-20
Anus	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.3	0.03	0.03	0.4	C21
Liver	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	1.6	0.14	0.23	2.2	C22
Gallbladder etc.	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	0.9	0.08	0.16	1.3	C23-24
Pancreas	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	1.1	0.07	0.16	1.5	C25
Nose, sinuses etc.	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.3	0.03	0.05	0.4	C30-31
Larynx	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.3	0.04	0.06	0.5	C32
Trachea, bronchus and lung	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4	2.9	0.21	0.45	4.0	C33-34
Other thoracic organs	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	1.1	0.07	0.17	1.5	C37-38
Bone	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6	1.0	0.10	0.15	1.5	C40-41
Melanoma of skin	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	0.7	0.05	0.12	1.0	C43
Other skin	226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.8	7.8	0.30	0.70	10.5	C44
Mesothelioma	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.0	0.00	0.01	0.1	C45
Kaposi sarcoma	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.0	0.00	0.00	0.1	C46
Connective and soft tissue	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.0	2.0	0.16	0.26	2.9	C47,C49
Breast	691	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36.0	23.8	2.50	3.48	31.7	C50
Vulva	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.2	0.01	0.02	0.3	C51
Vagina	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	0.01	0.02	0.2	C52
Cervix uteri	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.8	3.2	0.34	0.45	4.2	C53
Corpus uteri	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.3	3.5	0.35	0.60	5.0	C54
Uterus unspecified	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6	1.1	0.12	0.13	1.4	C55
Ovary	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.1	4.0	0.41	0.54	5.3	C56
Other female genital organs	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.00	0.02	0.1	C57
Placenta	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C58
Kidney	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	1.7	0.19	0.29	2.4	C64
Renal pelvis	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	0.02	0.02	0.2	C65
Ureter	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C66
Bladder	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.9	2.6	0.15	0.38	3.5	C67
Other urinary organs	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C68
Eye	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.2	0.02	0.02	0.3	C69
Brain, nervous system	102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.3	3.5	0.33	0.57	4.9	C70-72
Thyroid	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.0	7.9	0.82	0.97	10.4	C73
Adrenal gland	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.2	0.03	0.03	0.4	C74
Other endocrine	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.01	0.1	C75
Hodgkin disease	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6	1.0	0.09	0.12	1.5	C81
Non-Hodgkin lymphoma	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	1.5	0.14	0.25	2.2	C82-85,C96
Immunoproliferative diseases	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C88
Multiple myeloma	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	0.8	0.07	0.16	1.2	C90
Lymphoid leukaemia	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.3	1.6	0.14	0.21	2.6	C91
Myeloid leukaemia	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	1.3	0.10	0.18	1.8	C92-94
Leukaemia unspecified	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.5	0.05	0.05	0.7	C95
Myeloproliferative disorders	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.0	0.01	0.01	0.1	MPD
Myelodysplastic syndromes	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	MDS
Other and unspecified	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	2.1	0.16	0.27	3.0	O&U
All sites	3125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	162.7	93.9	16.21	147.1	ALL	
All sites but C44	2899	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	151.0	100.0	8.88	15.01	136.5	ALLbc44

. Reference population: World Standard Population

Table 20.
Tabriz Cancer Registry (1395)
Census1395

Incidence per 100,000 by age group (Period) - Male

SITE	ALL-AGE AGES UNK	Incidence per 100,000 by age group (Period) - Male										CRUDE RATE	CUM CUM ASR	ICD (10th)												
		0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49				50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+				
Lip	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.9	0.5	0.05	0.10	0.8	C00
Tongue	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.0	0.6	0.06	0.10	0.9	C01-02
Mouth	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.2	0.01	0.02	0.4	C03-06
Salivary glands	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.4	0.03	0.07	0.7	C07-08
Tonsil	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	0.01	0.02	0.1	C09
Other oropharynx	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C10
Nasopharynx	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	0.3	0.03	0.05	0.5	C11
Hypopharynx	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.2	0.02	0.04	0.3	C12-13
Pharynx unspecified	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.0	0.00	0.00	0.0	C14
Oesophagus	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.8	5.0	0.35	1.04	8.4	C15
Stomach	564	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28.4	16.1	1.13	3.14	26.5	C16
Small intestine	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	1.1	0.11	0.20	1.8	C17
Colon	288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.5	8.2	0.64	1.80	14.1	C18
Rectum	134	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.7	3.8	0.43	0.76	6.5	C19-20
Anus	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.3	0.03	0.04	0.4	C21
Liver	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.3	1.9	0.14	0.30	3.0	C22
Gallbladder etc.	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.5	0.03	0.11	0.8	C23-24
Pancreas	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	1.9	0.12	0.39	3.2	C25
Nose, sinuses etc.	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.2	0.01	0.03	0.3	C30-31
Larynx	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	2.0	0.23	0.51	3.7	C32
Trachea, bronchus and lung	239	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.0	6.8	0.62	1.49	11.6	C33-34
Other thoracic organs	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	1.0	0.08	0.20	1.7	C37-38
Bone	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.5	1.4	0.16	0.23	2.6	C40-41
Melanoma of skin	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	0.7	0.05	0.10	1.0	C43
Other skin	403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.3	11.5	0.83	2.23	18.8	C44
Mesothelioma	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.02	0.1	C45
Kaposi sarcoma	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	0.00	0.03	0.2	C46
Connective and soft tissue	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	1.6	0.18	0.23	2.7	C47-C49
Breast	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	0.3	0.03	0.03	0.4	C50
Penis	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C60
Prostate	420	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.1	12.0	0.76	2.56	20.2	C61
Testis	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	0.8	0.08	0.09	1.2	C62
Other male genital organs	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.0	0.01	0.01	0.1	C63
Kidney	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2	2.4	0.28	0.56	4.4	C64
Renal pelvis	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.1	0.03	0.03	0.2	C65
Ureter	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.01	0.02	0.1	C66
Bladder	424	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.3	12.1	1.04	2.48	20.4	C67
Other urinary organs	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	0.00	0.00	0.1	C68
Eye	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.5	0.02	0.08	0.7	C69
Brain, nervous system	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9	3.3	0.39	0.55	5.5	C70-72
Thyroid	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6	1.5	0.18	0.26	2.4	C73
Adrenal gland	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	0.2	0.03	0.07	0.5	C74
Other endocrine	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.1	0.00	0.00	0.2	C75
Hodgkin disease	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	1.3	0.16	0.21	2.4	C81
Non-Hodgkin lymphoma	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	1.6	0.18	0.27	2.7	C82-85,C96
Immunoproliferative diseases	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	C88
Multiple myeloma	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	1.3	0.11	0.33	2.4	C90
Lymphoid leukaemia	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.7	2.6	0.26	0.46	4.9	C91
Myeloid leukaemia	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.0	2.2	0.25	0.34	3.8	C92-94
Leukaemia unspecified	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	1.0	0.09	0.18	1.7	C95
Myeloproliferative disorders	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	MPD
Myelodysplastic syndromes	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	0.00	0.00	0.0	MDS
Other and unspecified	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	1.6	0.17	0.30	2.7	O&U
All sites	3916	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	196.8	100.0	8.62	19.84	188.2	ALL
All sites but C44	3513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	176.6	100.0	8.62	19.84	169.4	ALL&C44

. Reference population: World Standard Population

Figure 47.
Tabriz Cancer Registry (1395)
 Age Specific Rates (Top Cancer Sites) (Females)

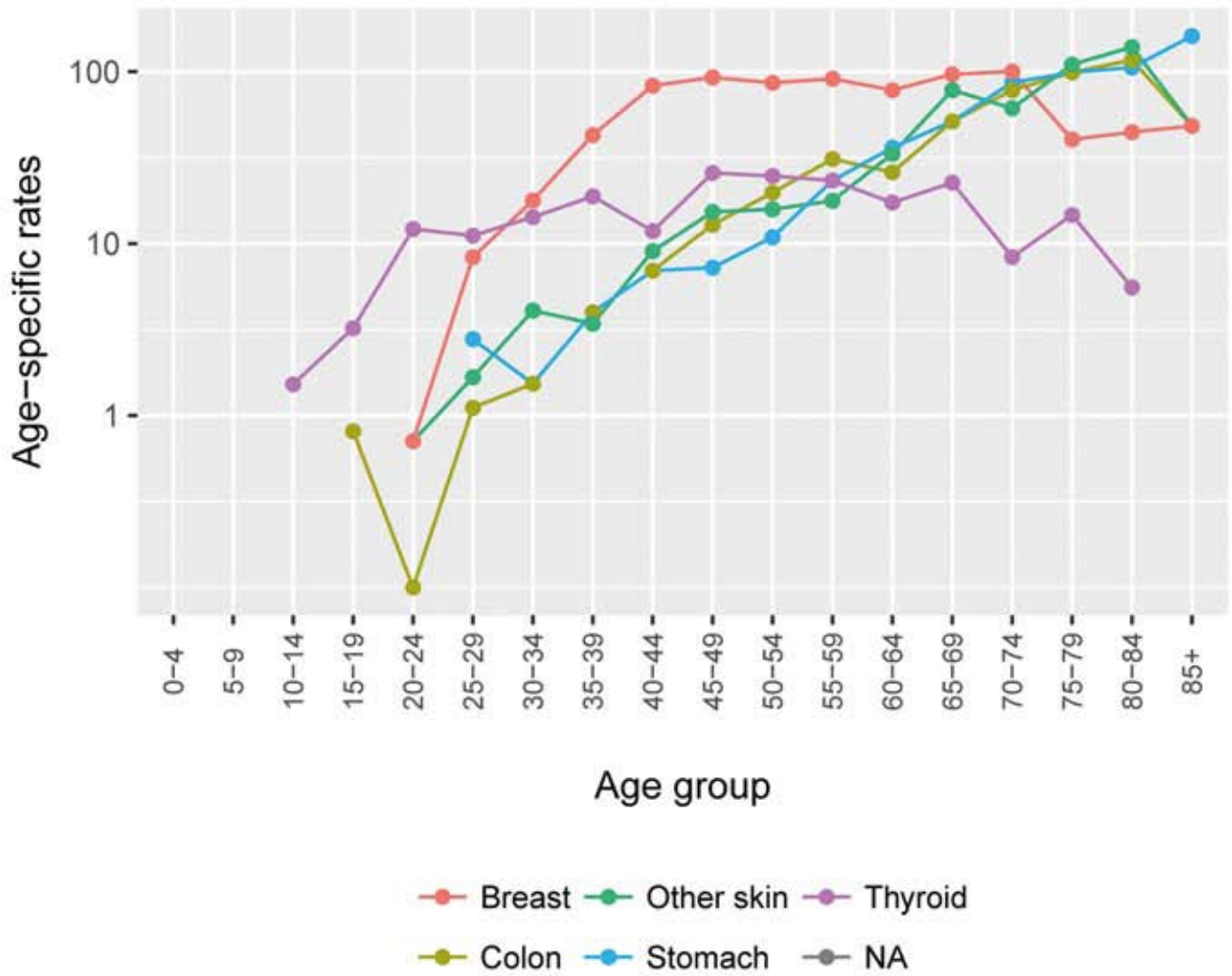


Figure 48.
Tabriz Cancer Registry (1395)
 Age Specific Rates (Top Cancer Sites) (Males)

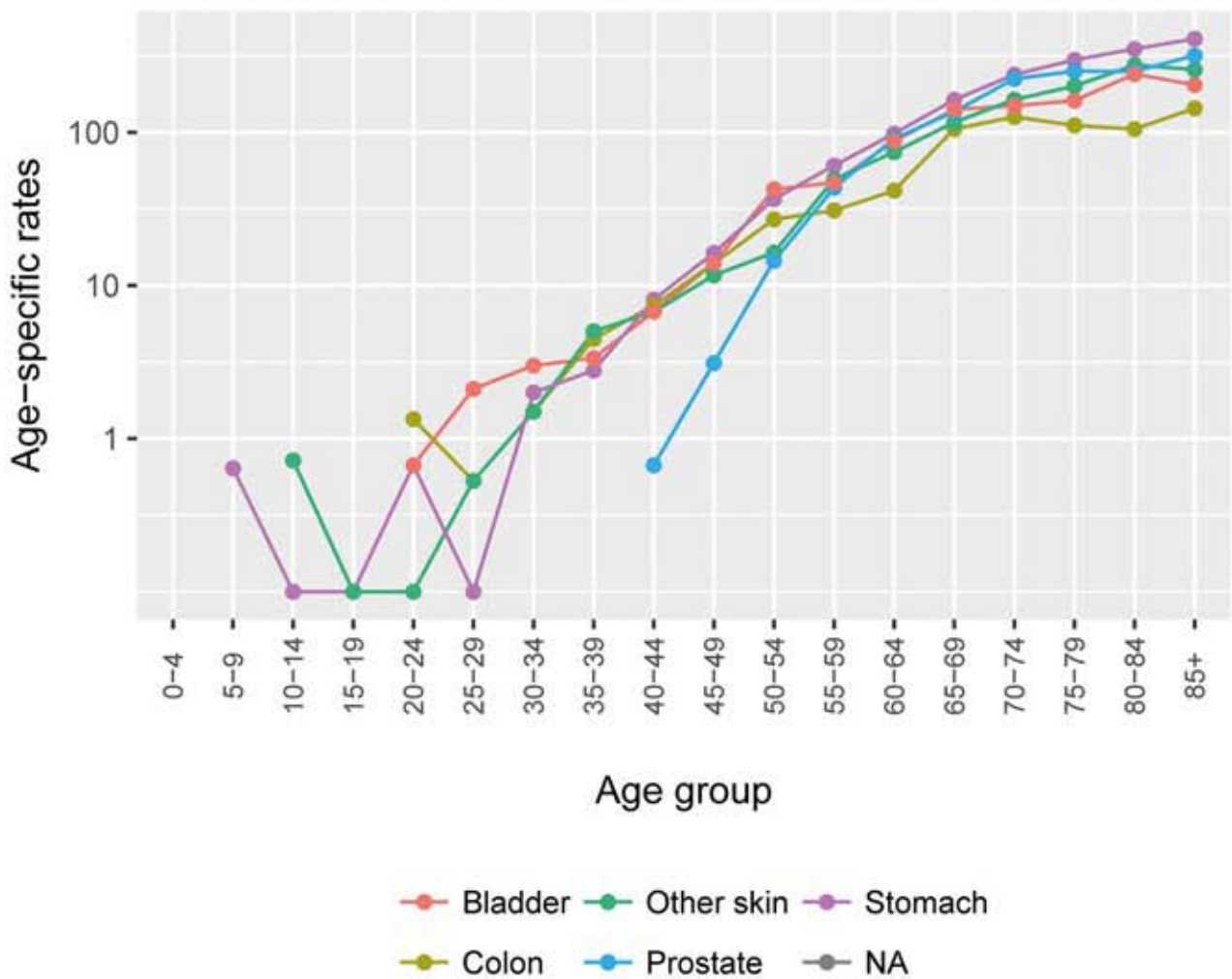


Figure 49.

Age-specific incidence rates per 100,000 in 1395

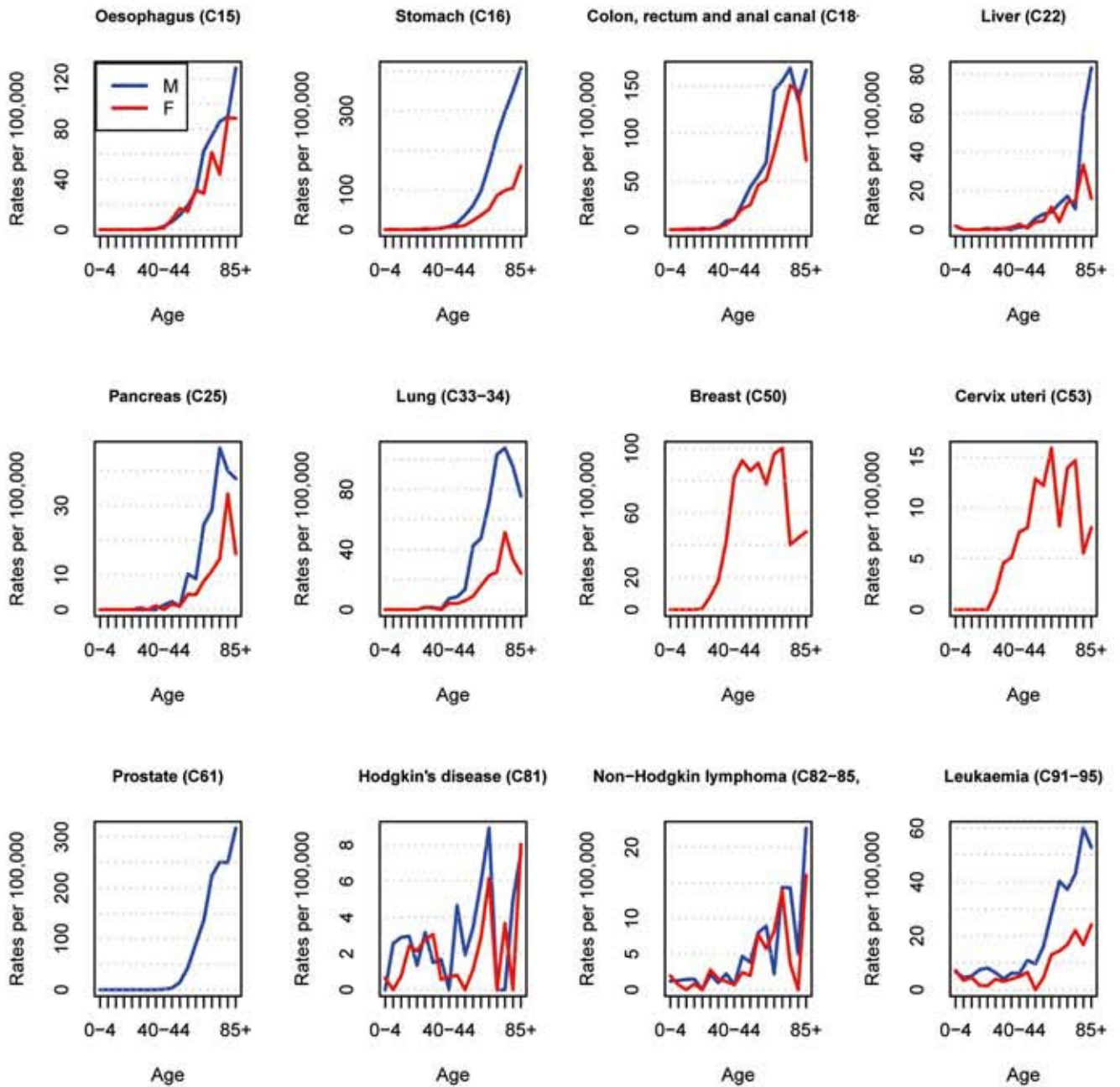


Figure 50.

**Age-specific incidence rates per 100,000 in 1395
Oesophagus (C15)**

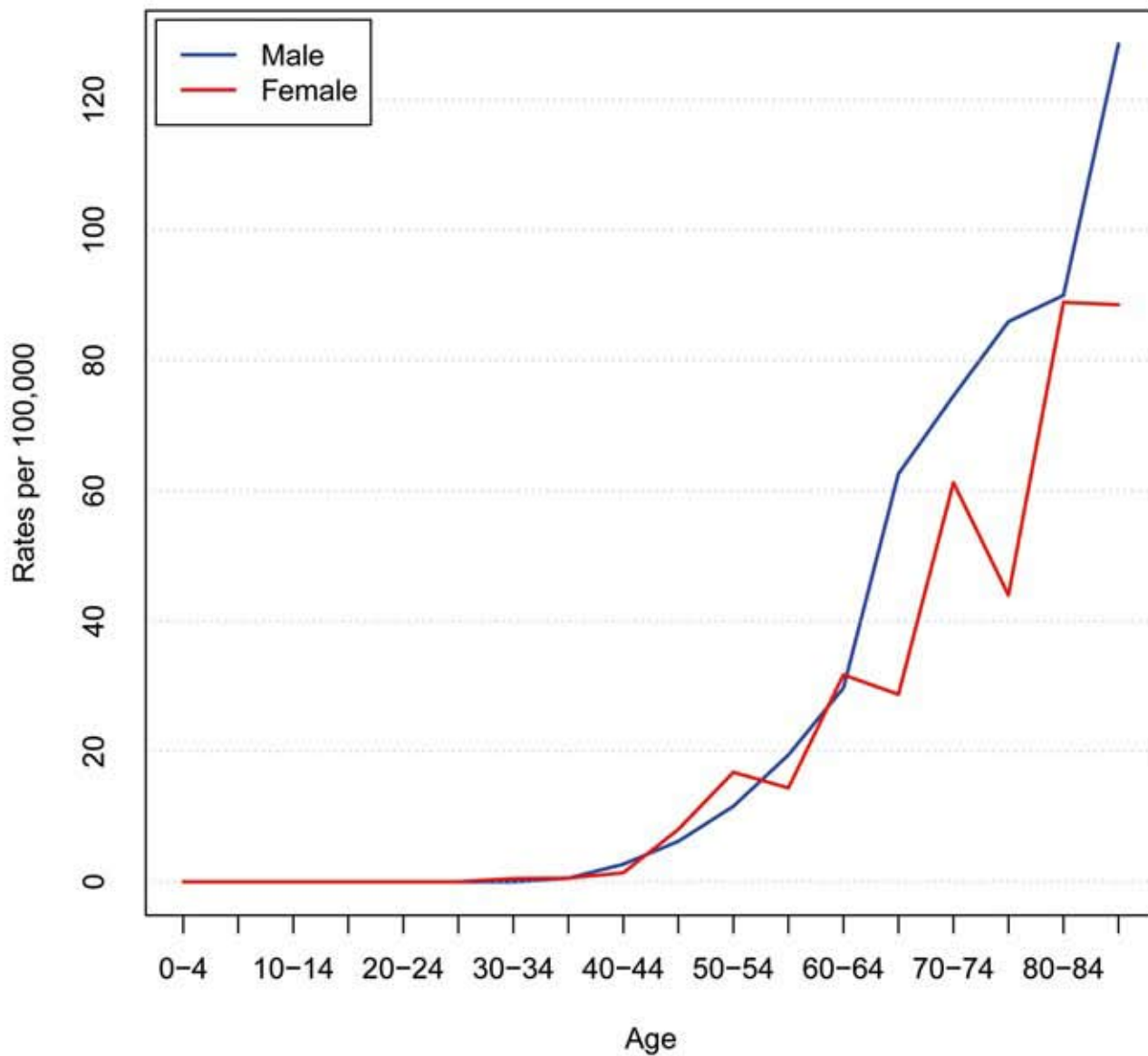


Figure 51.

**Age-specific incidence rates per 100,000 in 1395
Stomach (C16)**

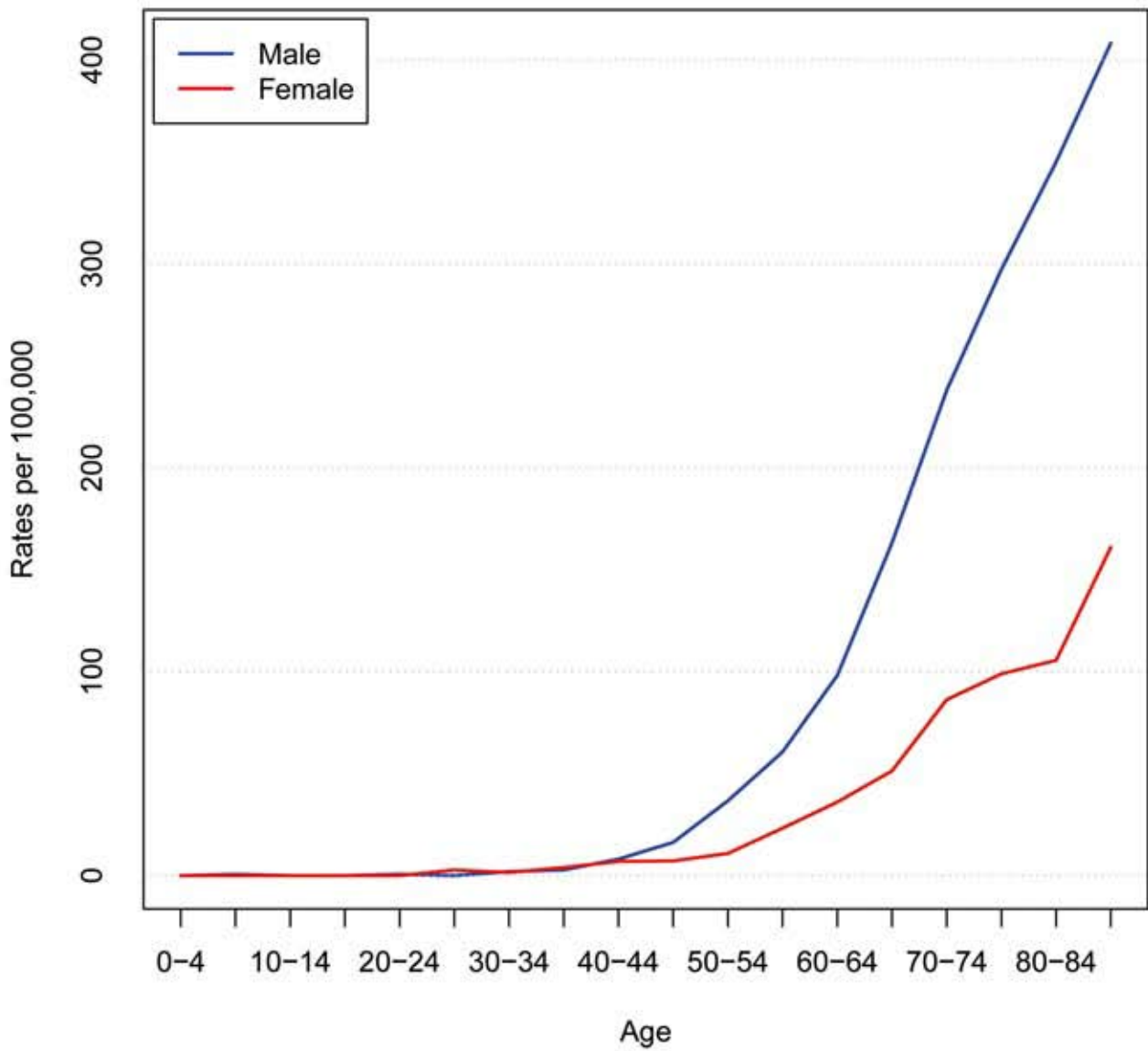


Figure 52.

**Age-specific incidence rates per 100,000 in 1395
Colon, rectum and anal canal (C18-21)**

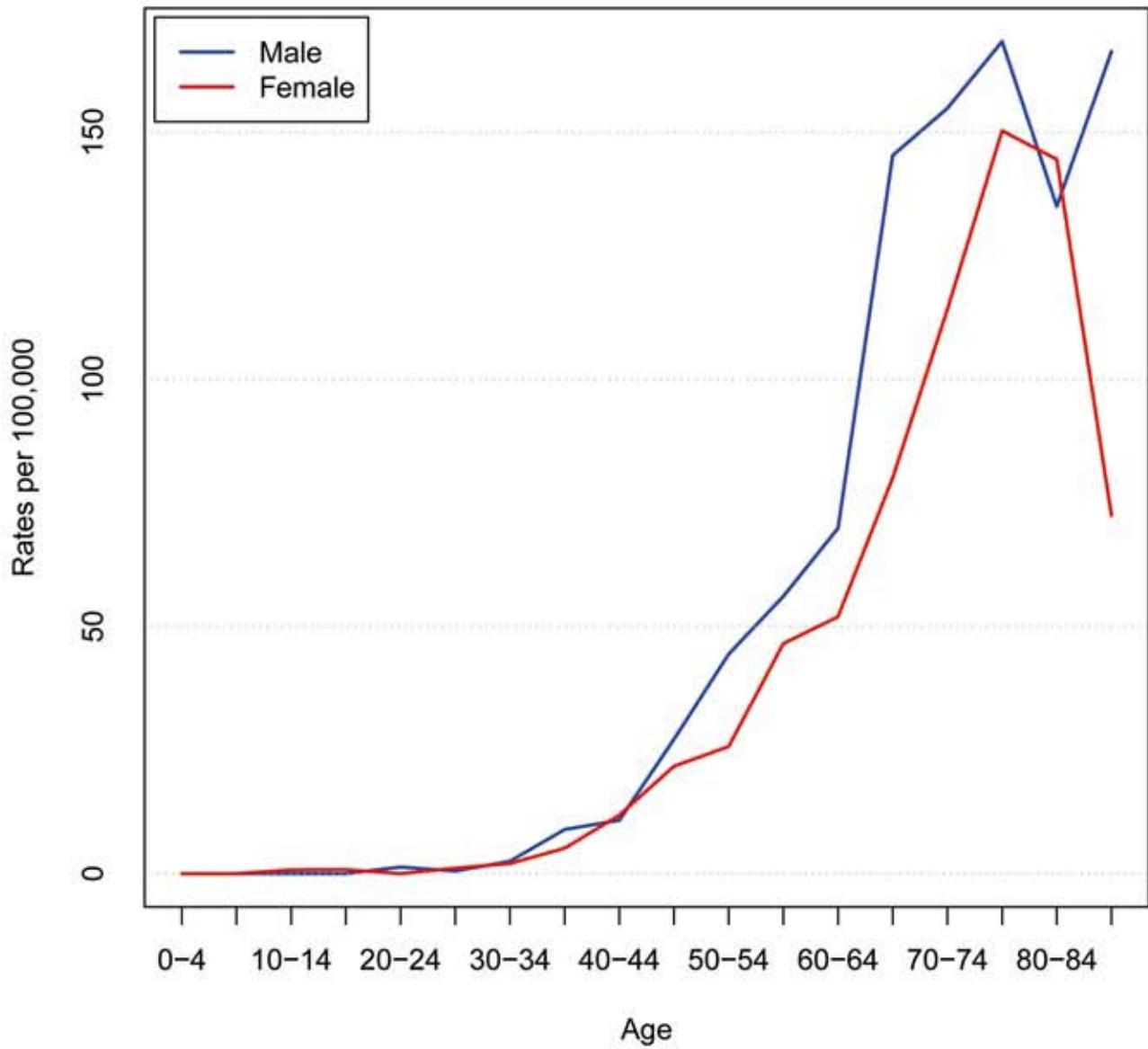


Figure 53.

**Age-specific incidence rates per 100,000 in 1395
Liver (C22)**

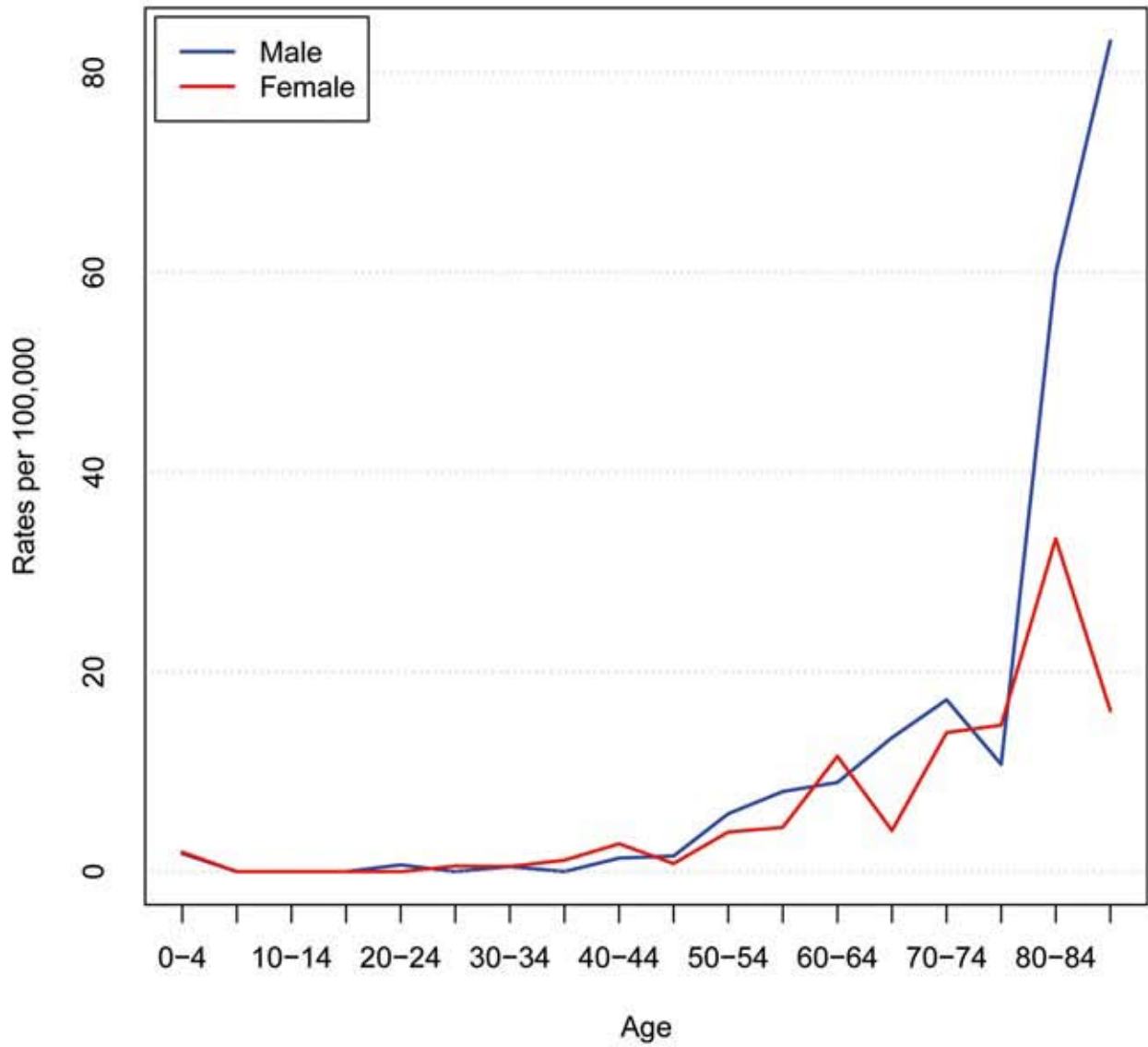


Figure 54.

**Age-specific incidence rates per 100,000 in 1395
Pancreas (C25)**

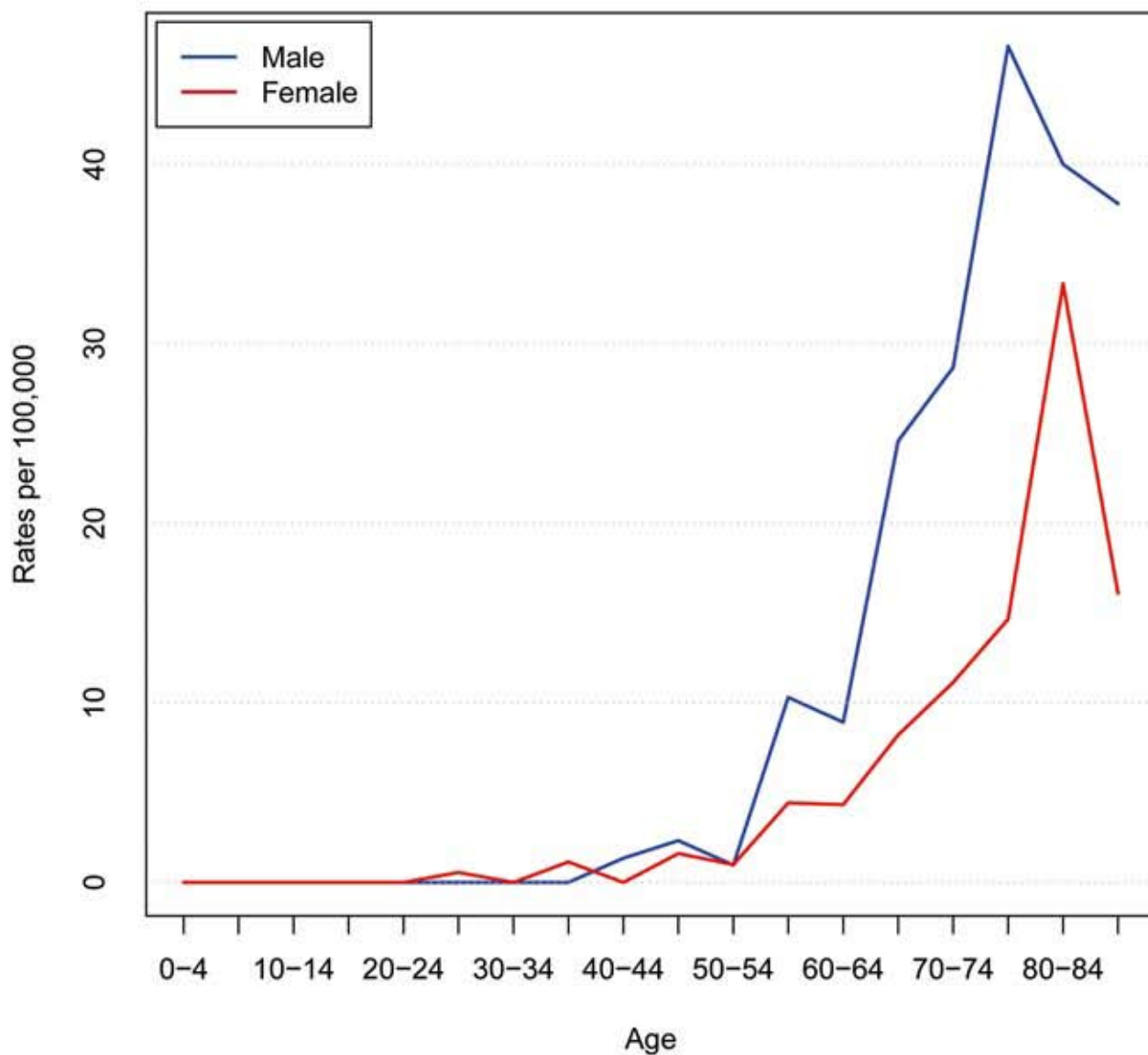


Figure 55.

**Age-specific incidence rates per 100,000 in 1395
Lung (C33-34)**

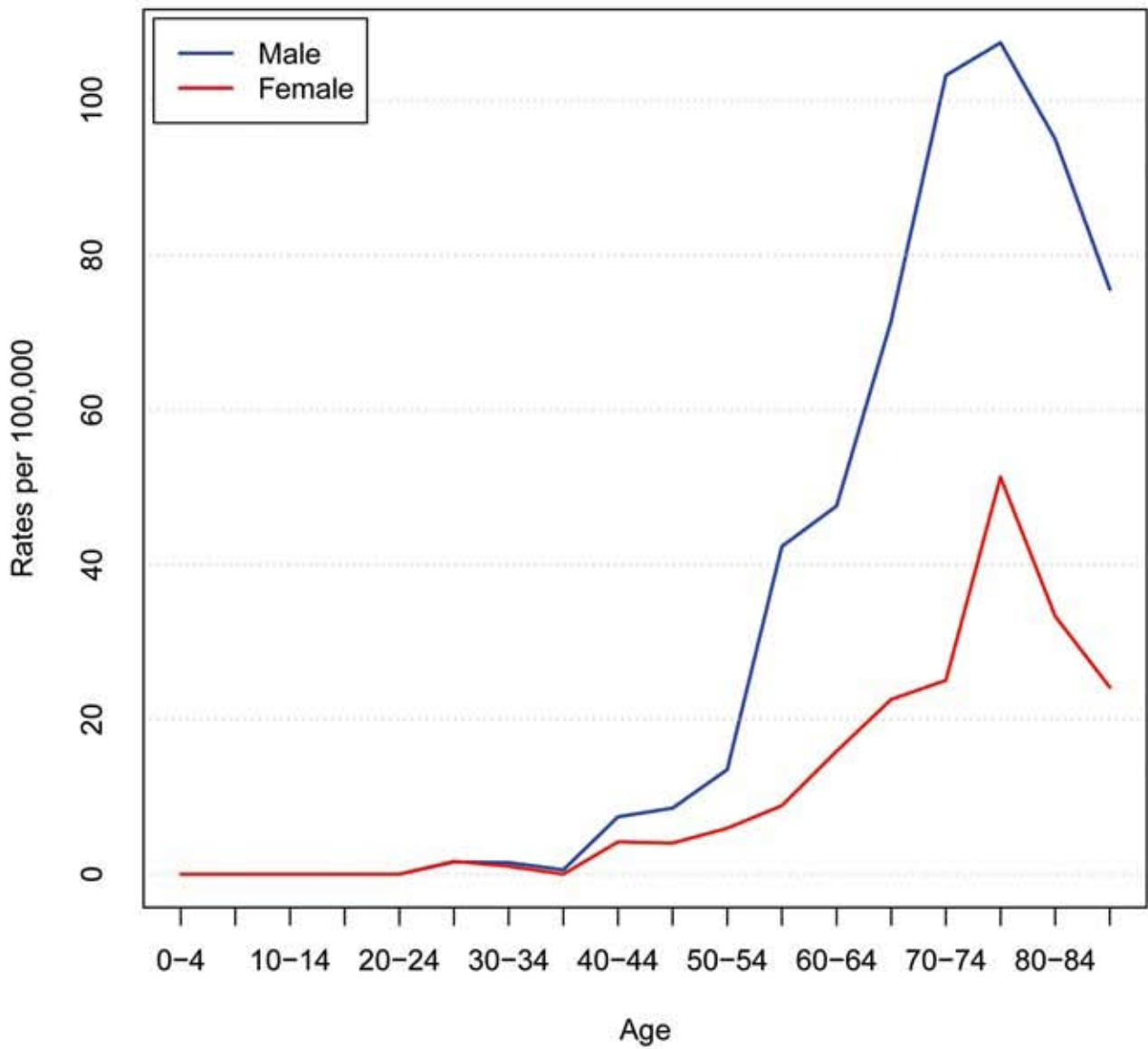


Figure 56.

**Age-specific incidence rates per 100,000 in 1395
Breast (C50)**

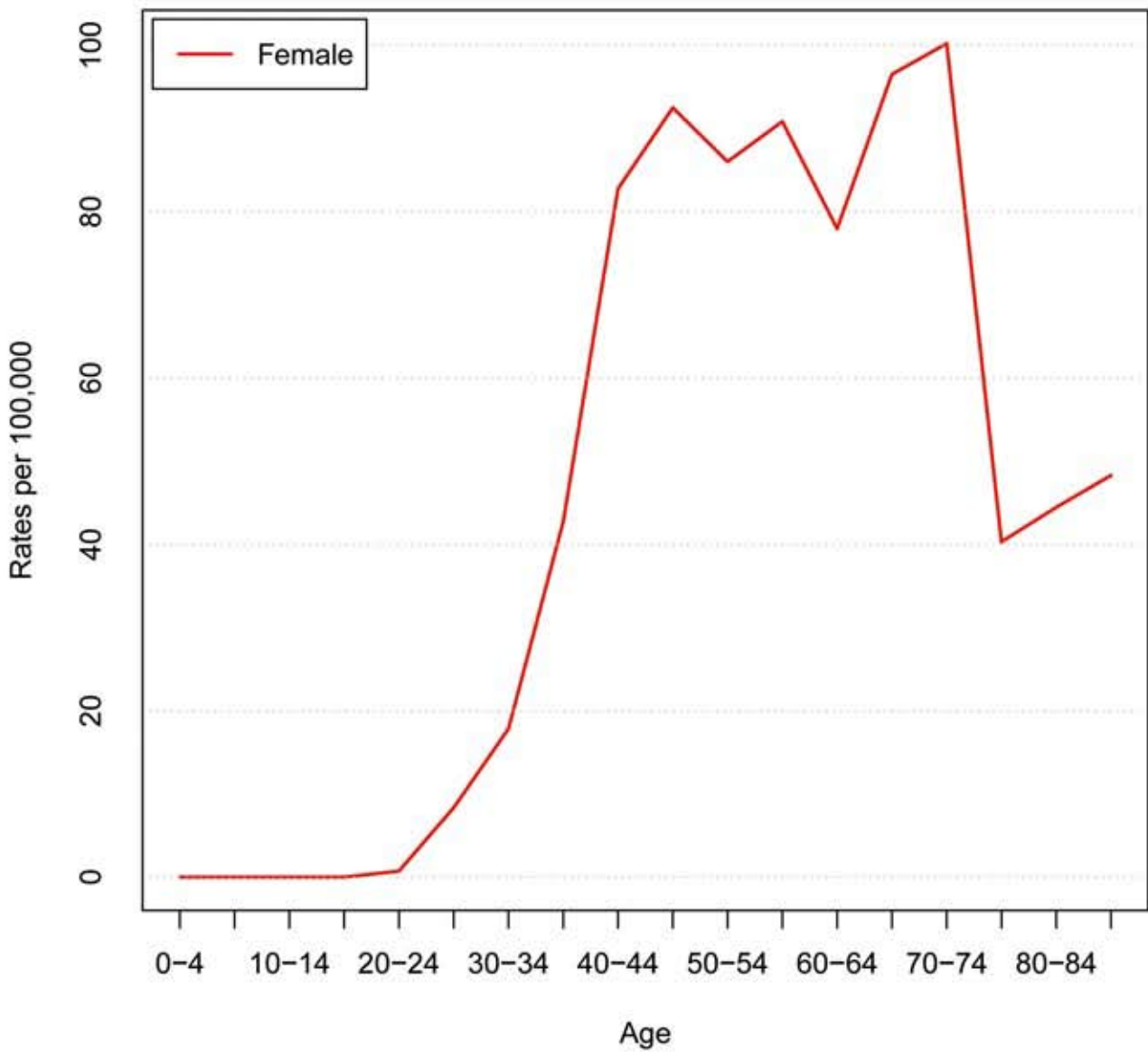


Figure 57.

**Age-specific incidence rates per 100,000 in 1395
Cervix uteri (C53)**

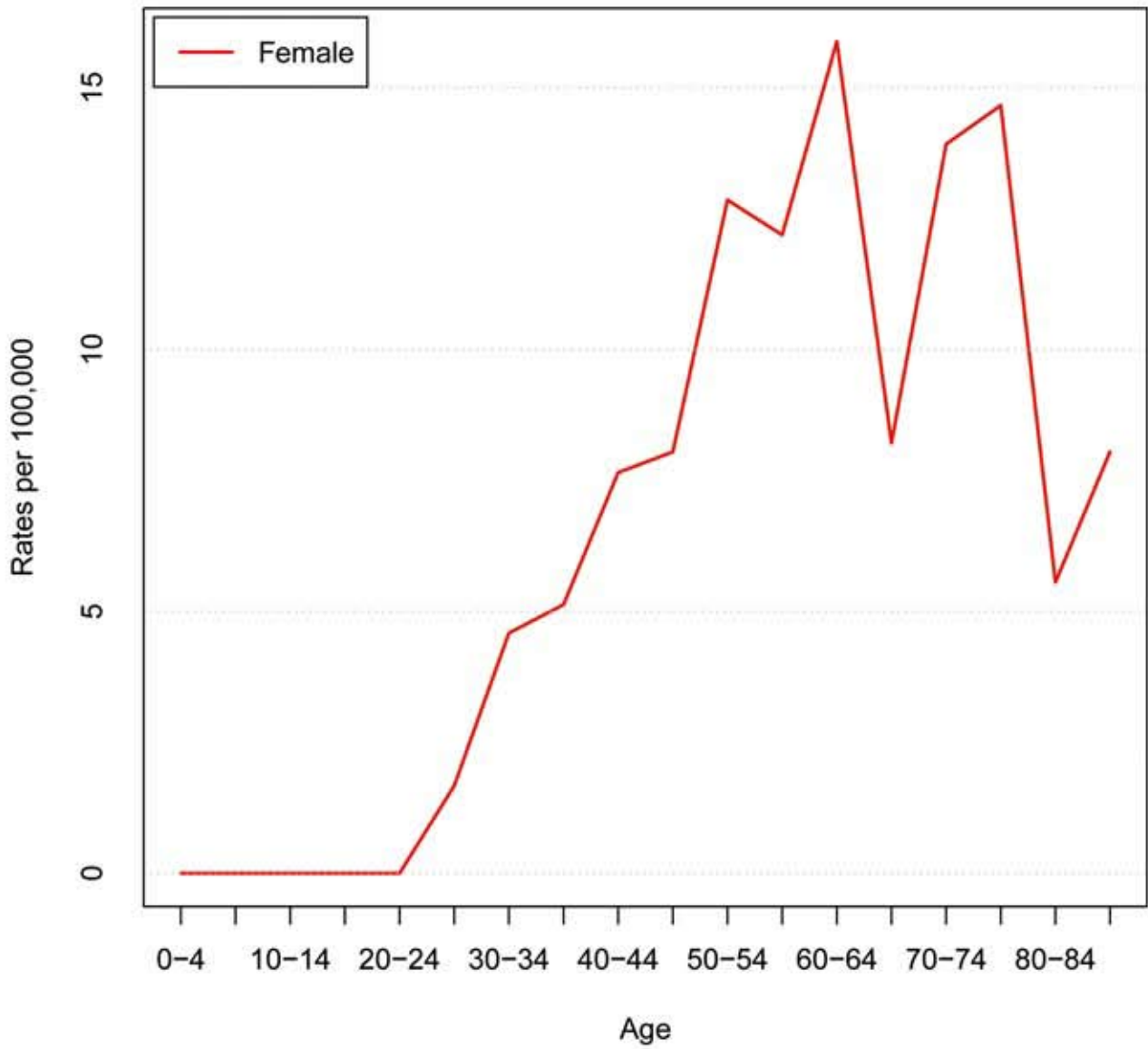


Figure 58.

**Age-specific incidence rates per 100,000 in 1395
Prostate (C61)**

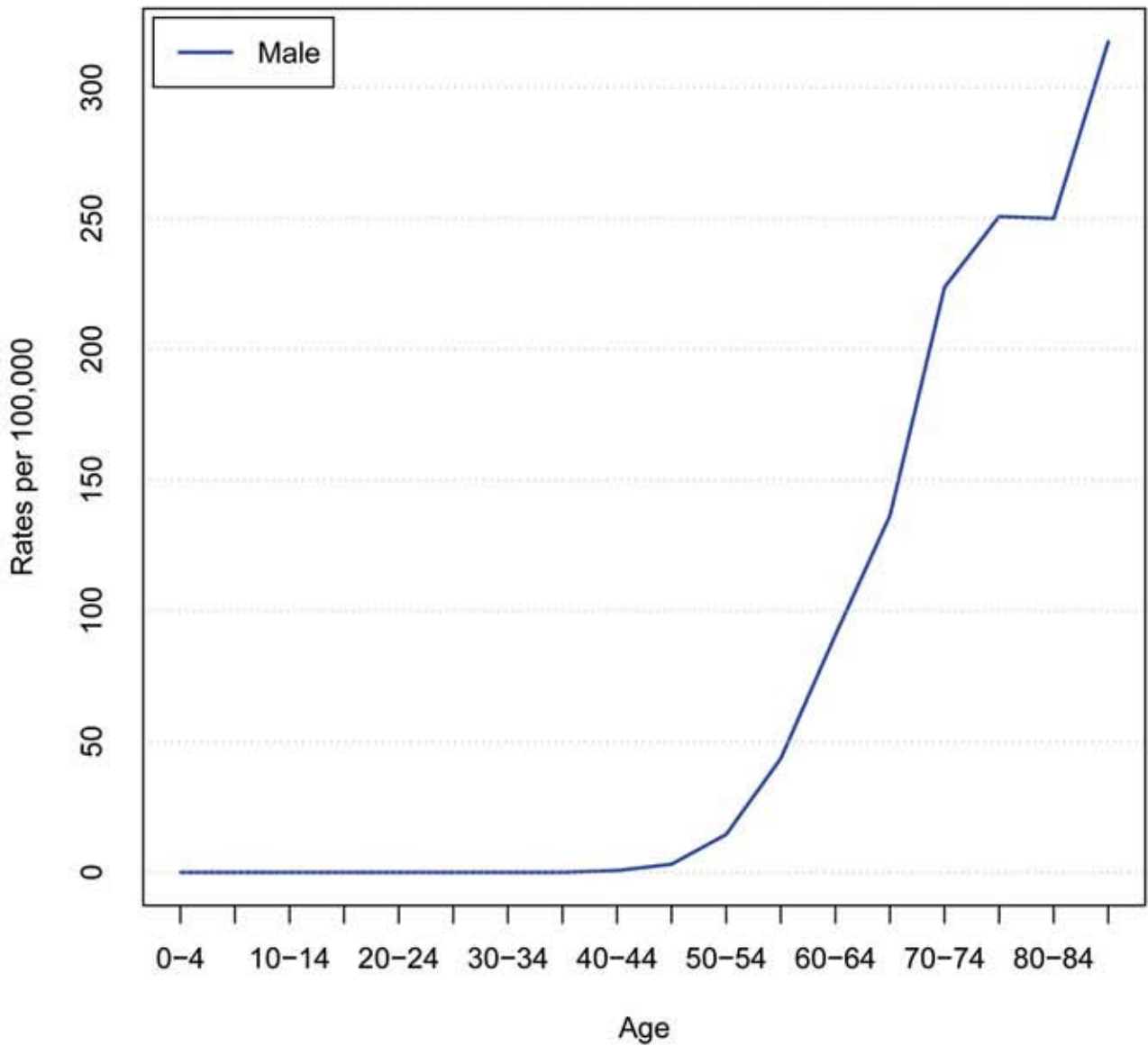


Figure 59.

**Age-specific incidence rates per 100,000 in 1395
Hodgkin's disease (C81)**

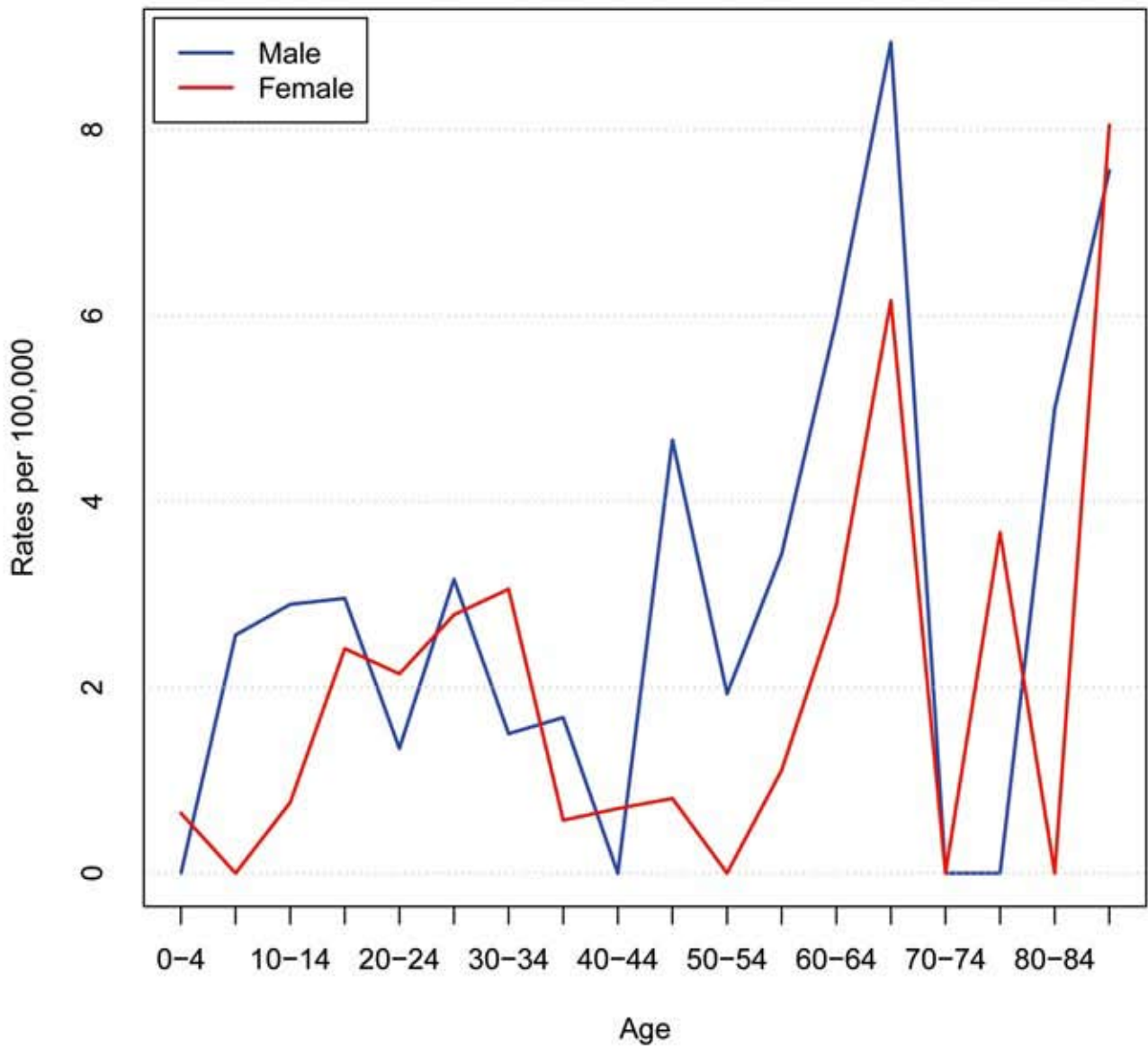


Figure 60.

**Age-specific incidence rates per 100,000 in 1395
Non-Hodgkin lymphoma (C82-85,96)**

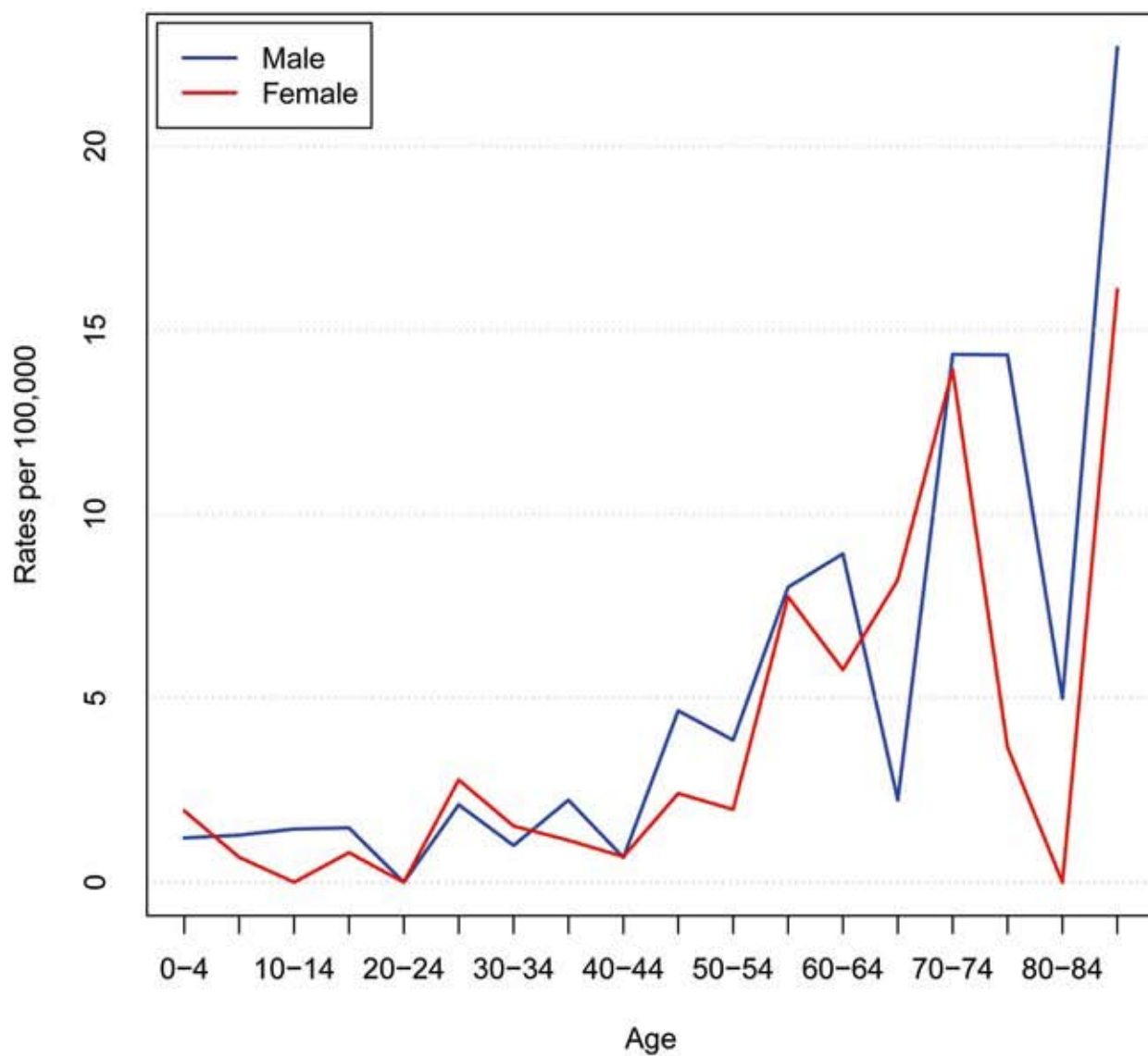


Figure 61.

**Age-specific incidence rates per 100,000 in 1395
Leukaemia (C91-95)**

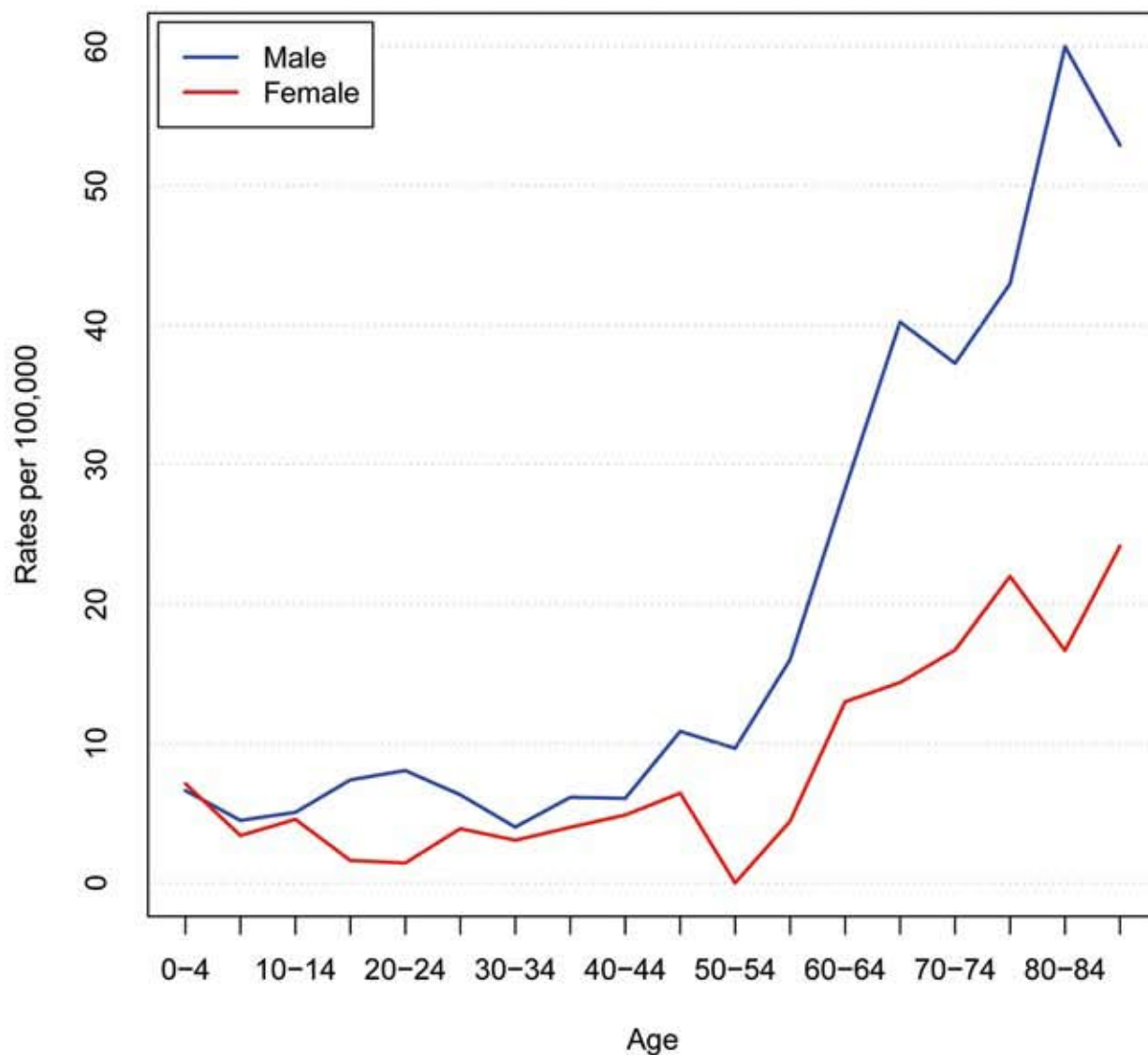


Figure 62.

Top 10 by CASES,
Tabriz Cancer Registry (1395), Female

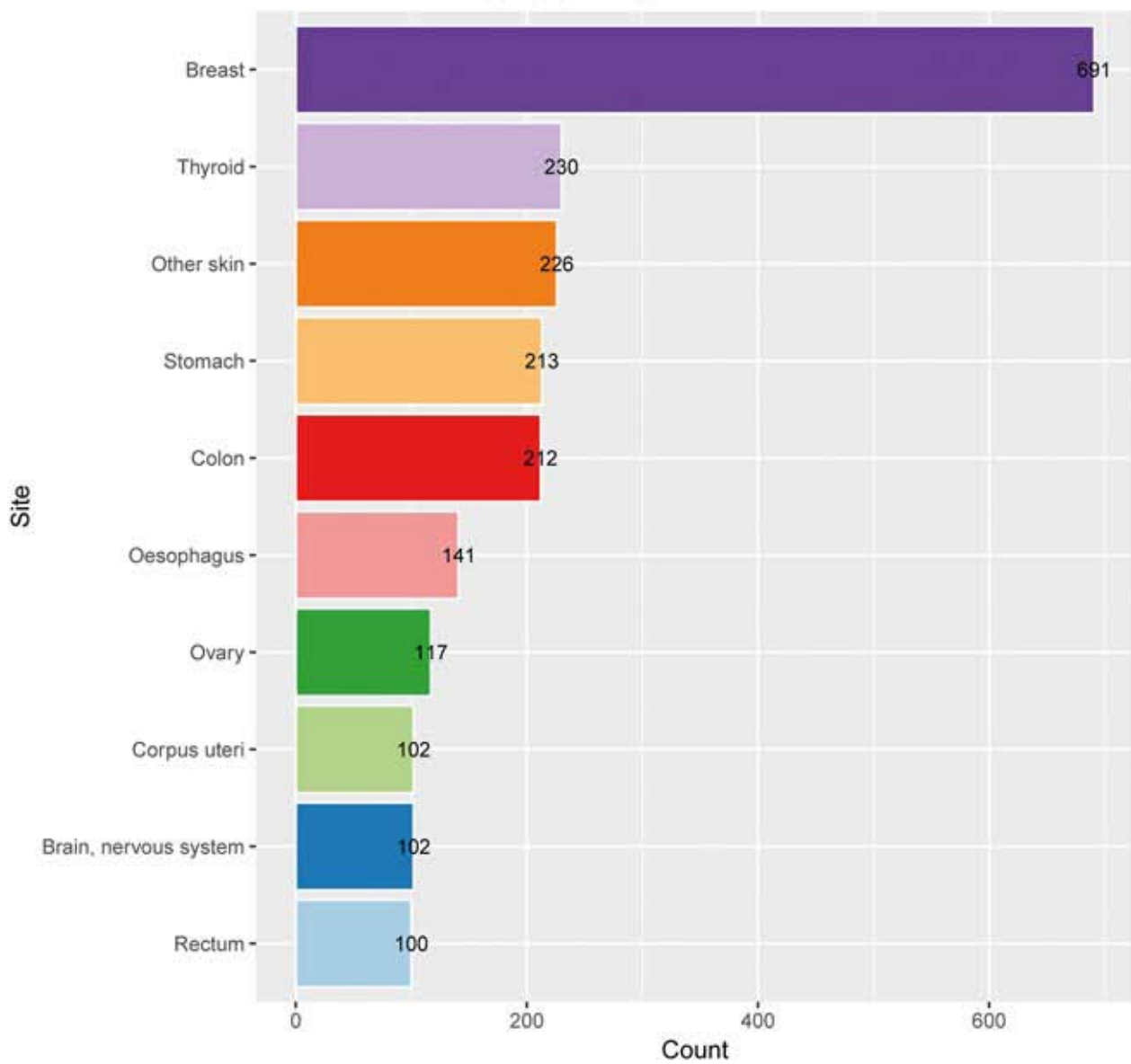


Figure 63.
Top 10 by CASES,
Tabriz Cancer Registry (1395), Male

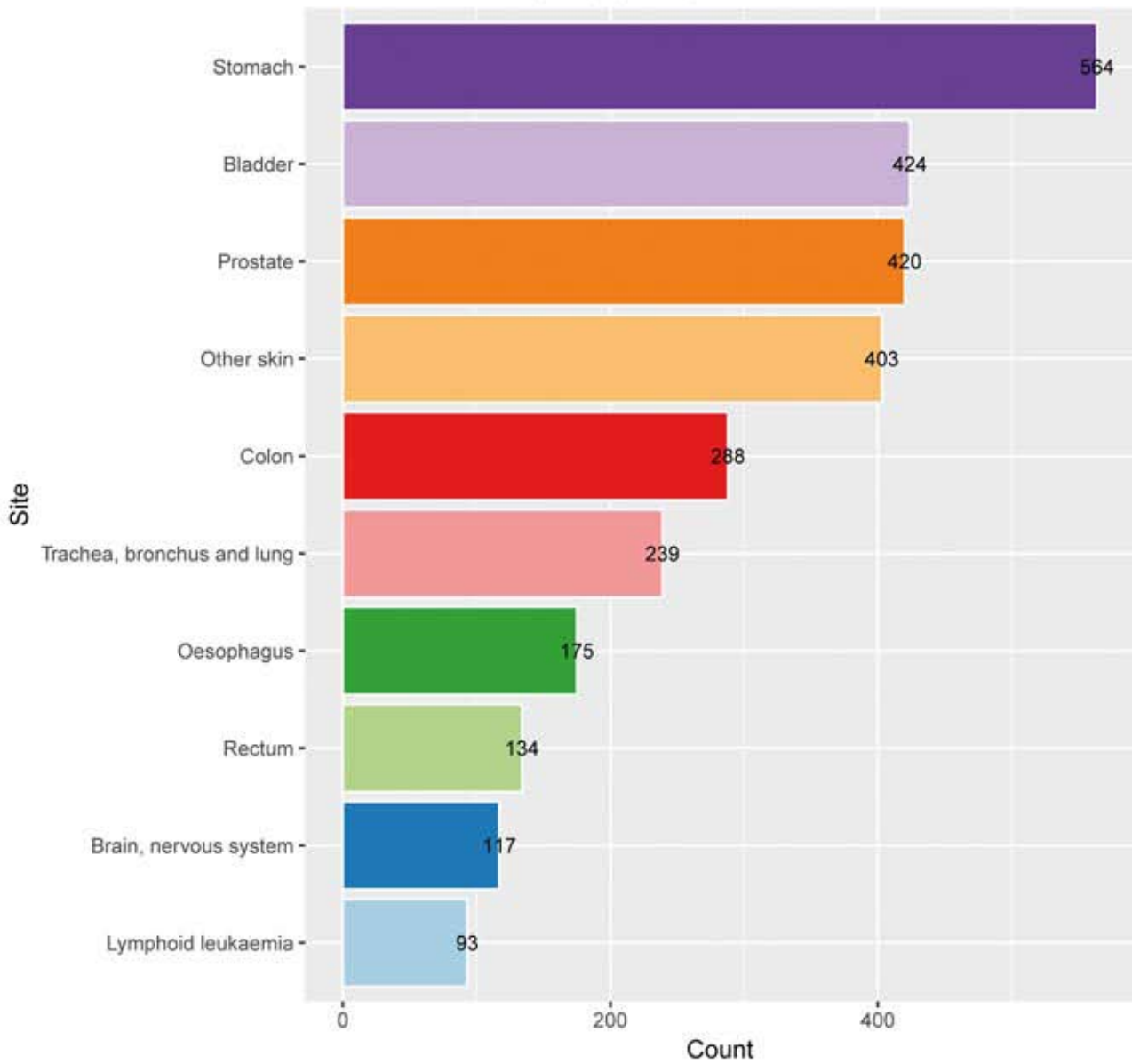


Figure 64.

Top 10 by ASR,
Tabriz Cancer Registry (1395), Female

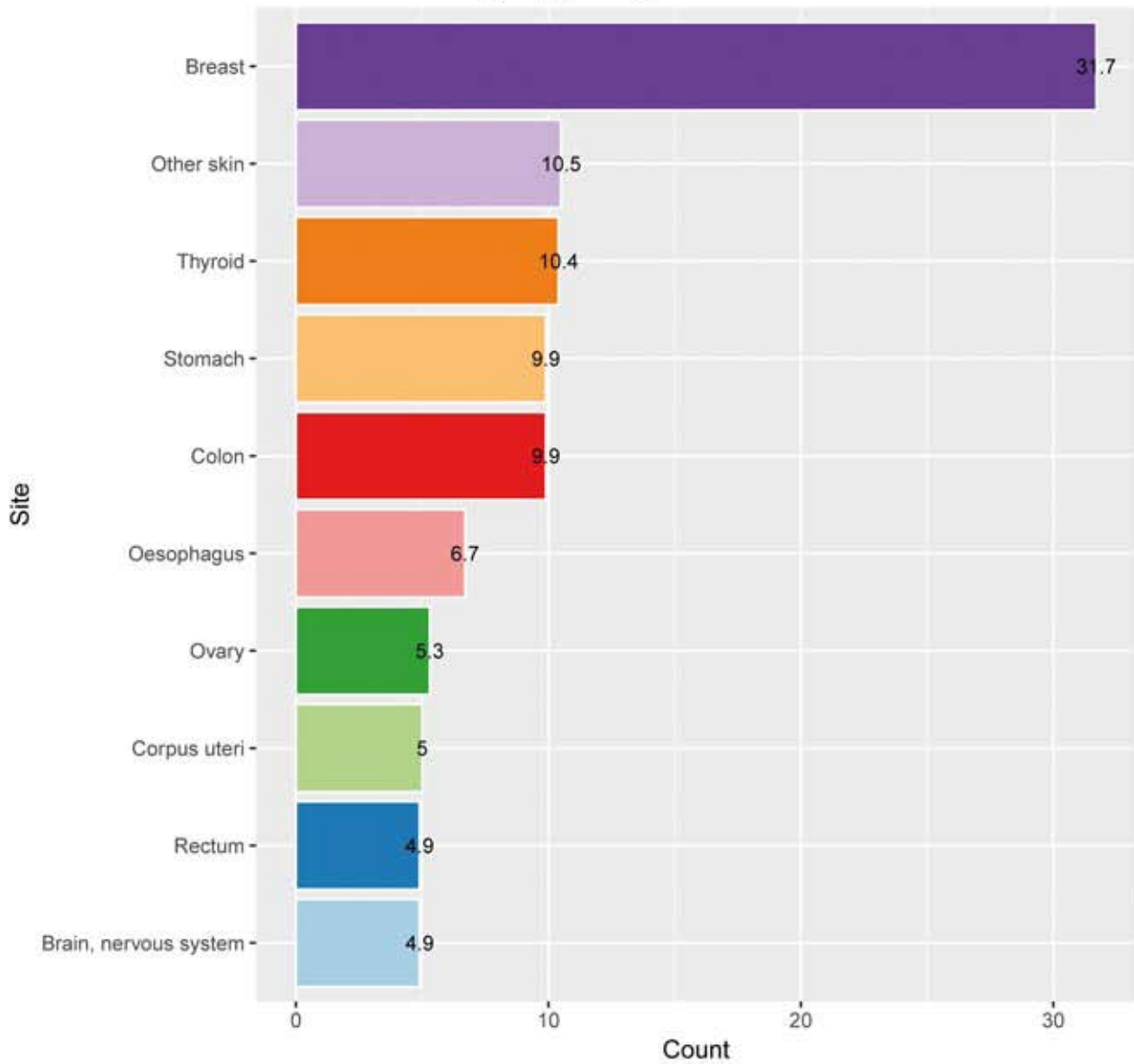


Figure 65.
Top 10 by ASR,
Tabriz Cancer Registry (1395), Male

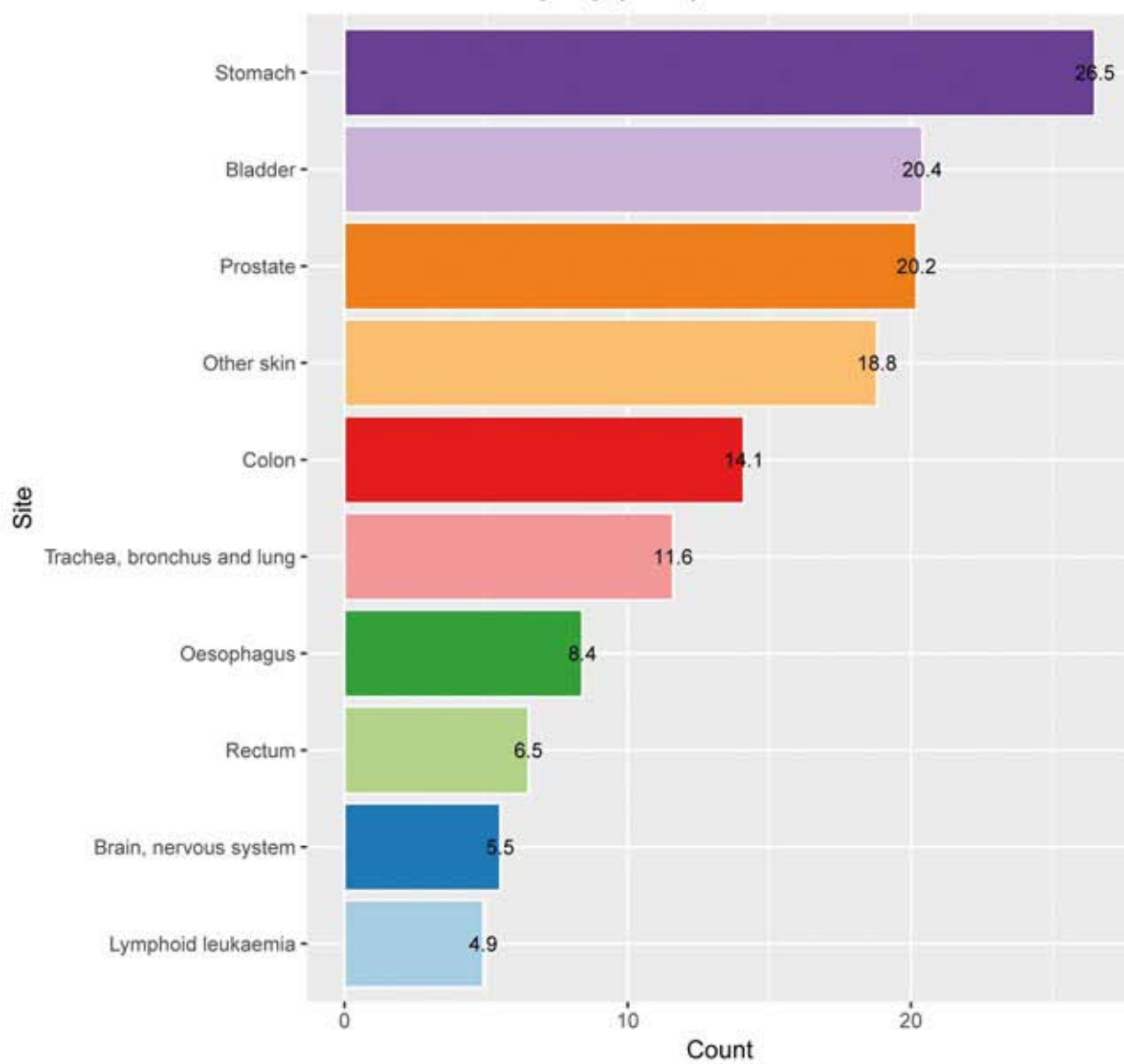


Figure 66.

Top 10 by CASES,
Tabriz Cancer Registry (1395), excluding C44, Female

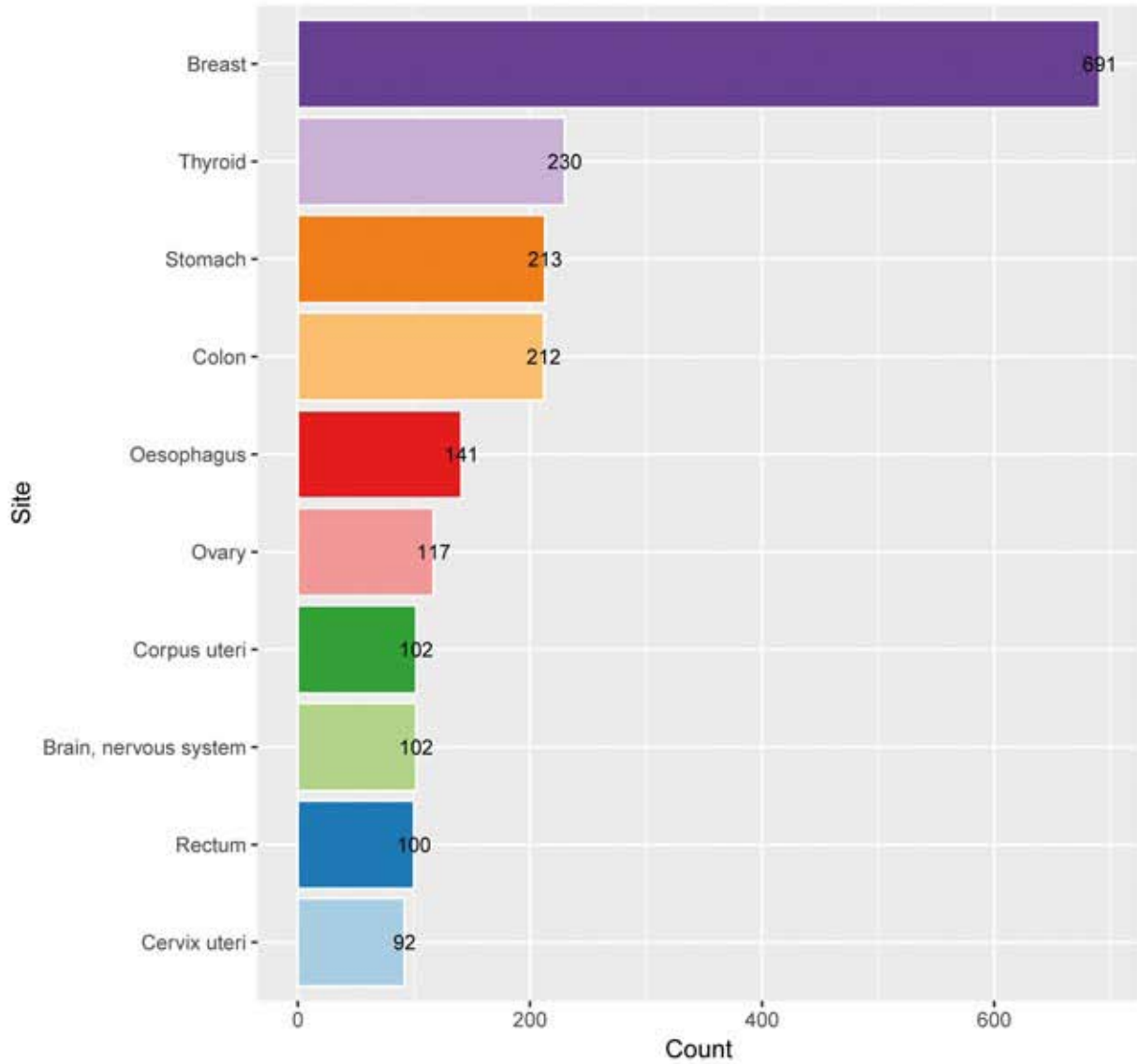


Figure 67.

Top 10 by CASES,
Tabriz Cancer Registry (1395), excluding C44, Male

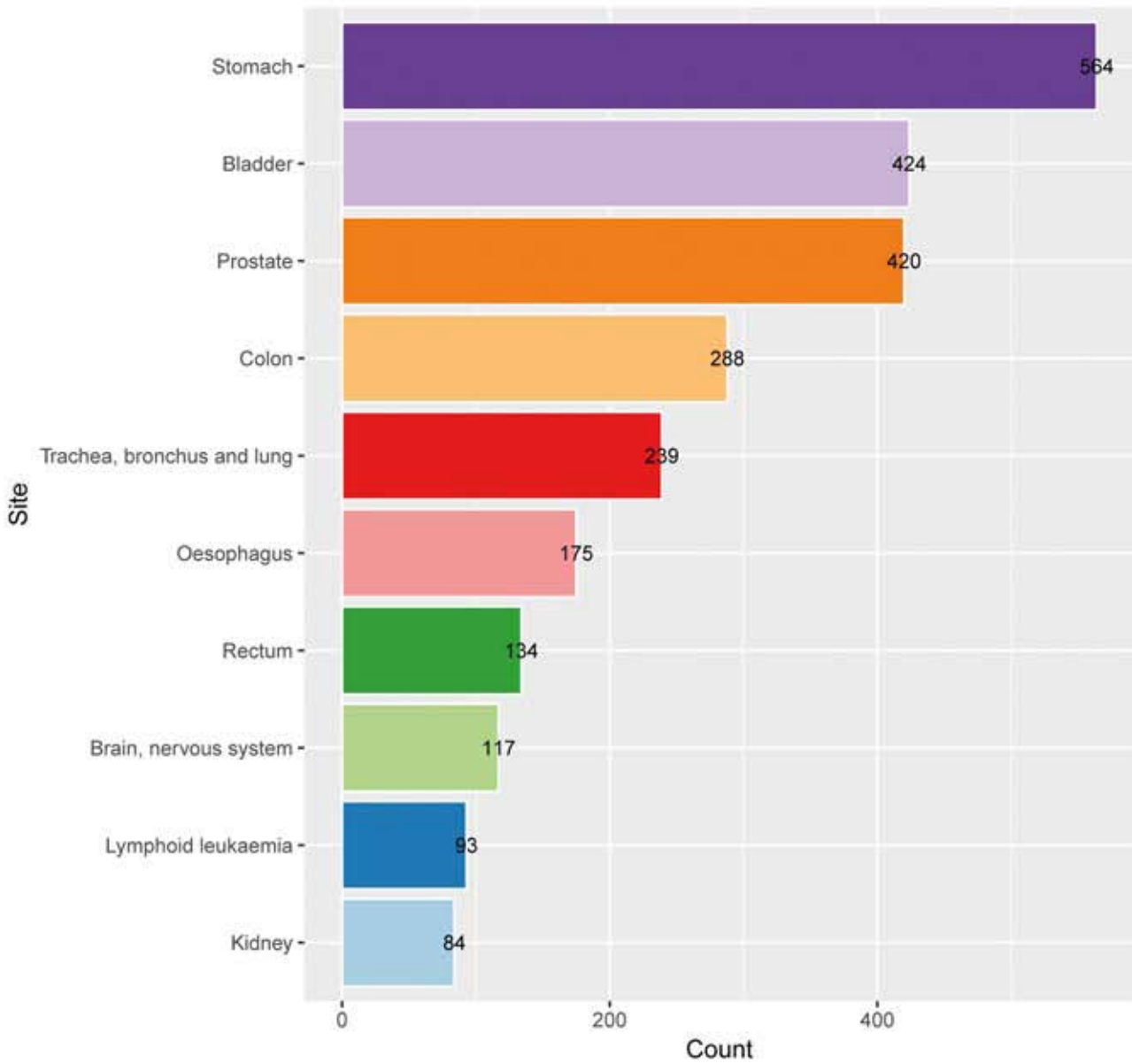


Figure 68.
Tabriz Cancer Registry (1395),
Female

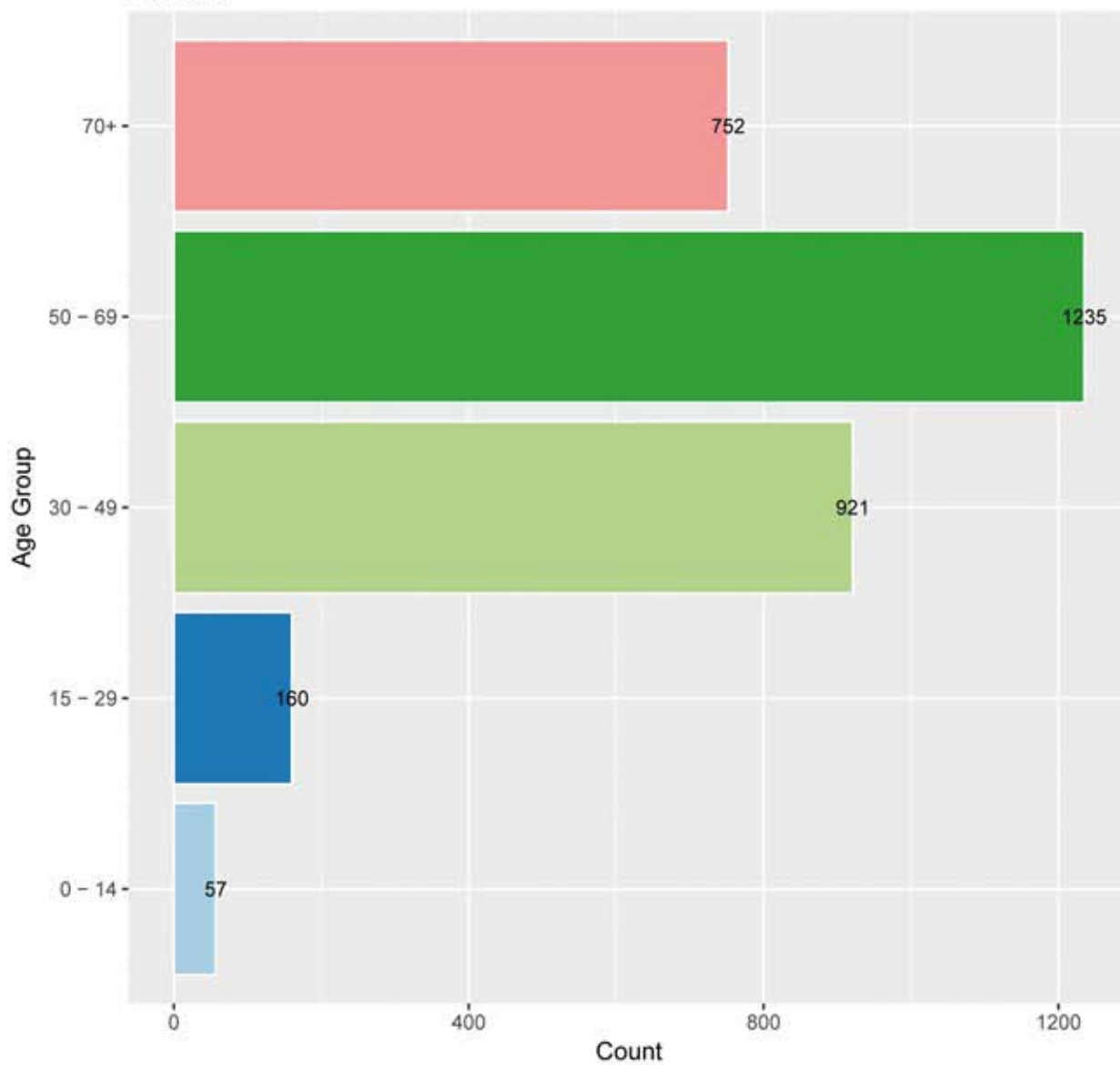


Figure 69.

Tabriz Cancer Registry (1395),
Male

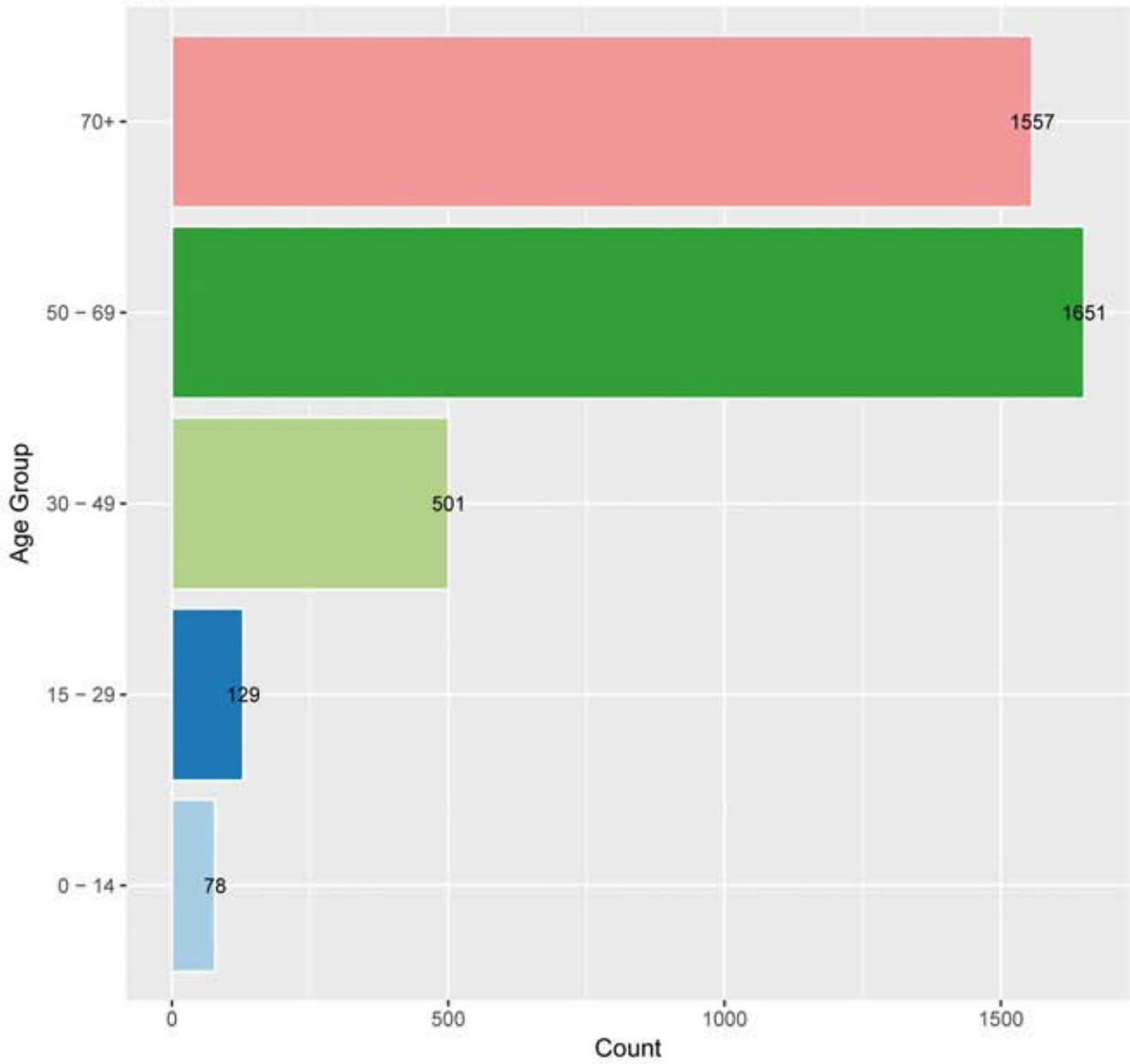


Figure 70.

Tabriz Cancer Registry (1395), excluding C44,
Female

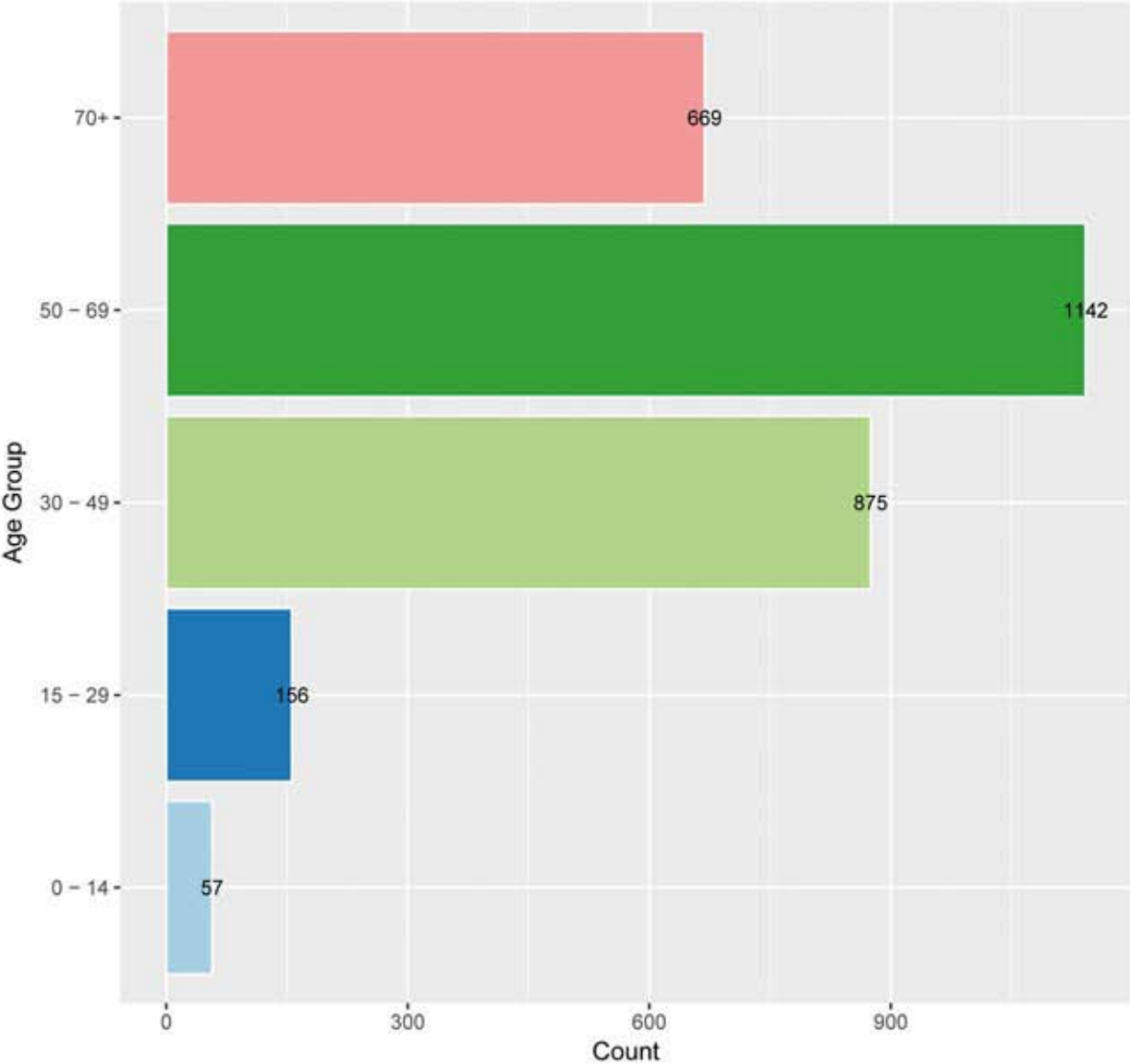


Figure 71.

Tabriz Cancer Registry (1395), excluding C44,
Male

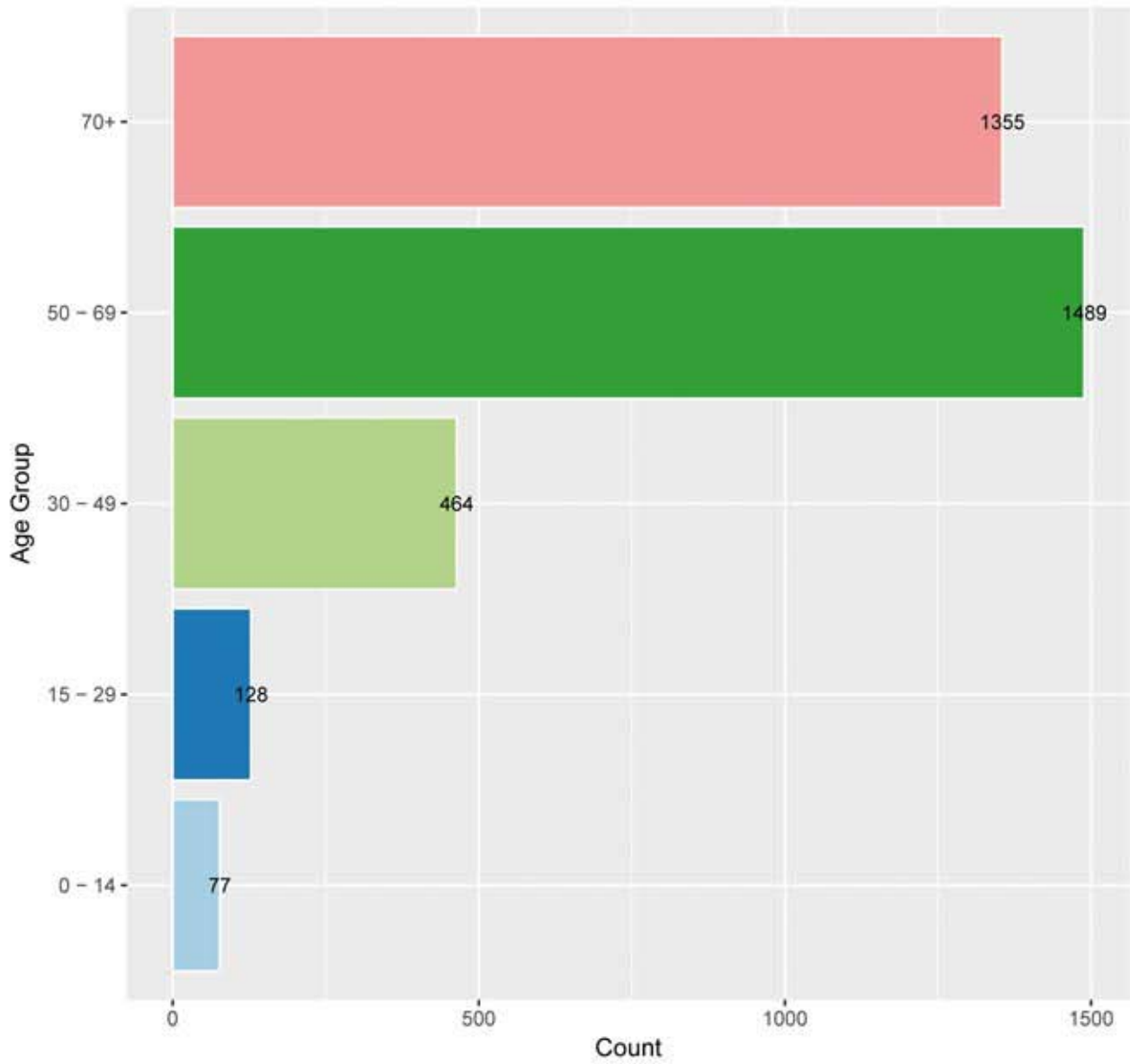


Figure 72.

Top 10 by CASES,
Tabriz Cancer Registry (1395), Female

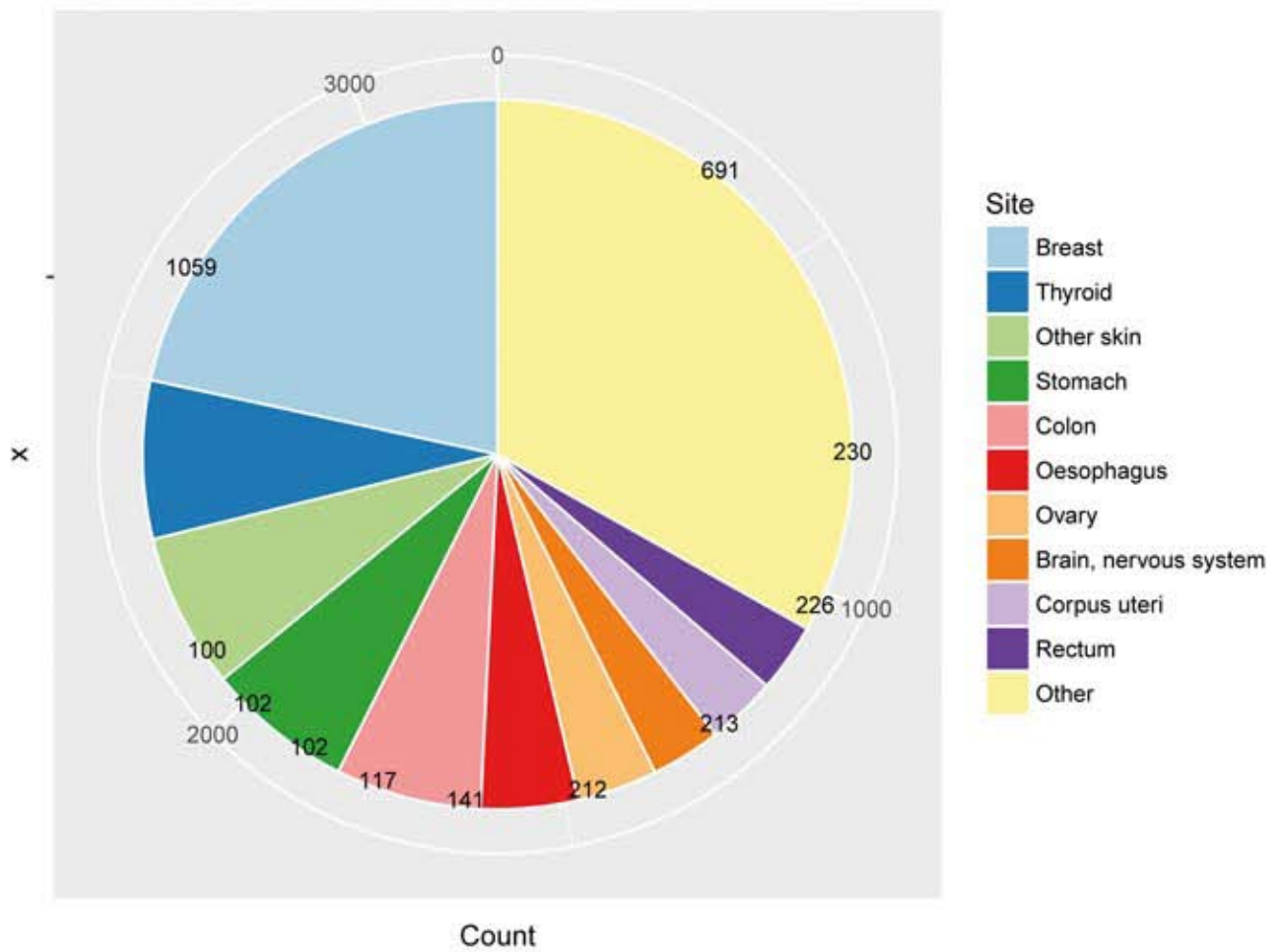


Figure 73.
 Top 10 by CASES,
 Tabriz Cancer Registry (1395), Male

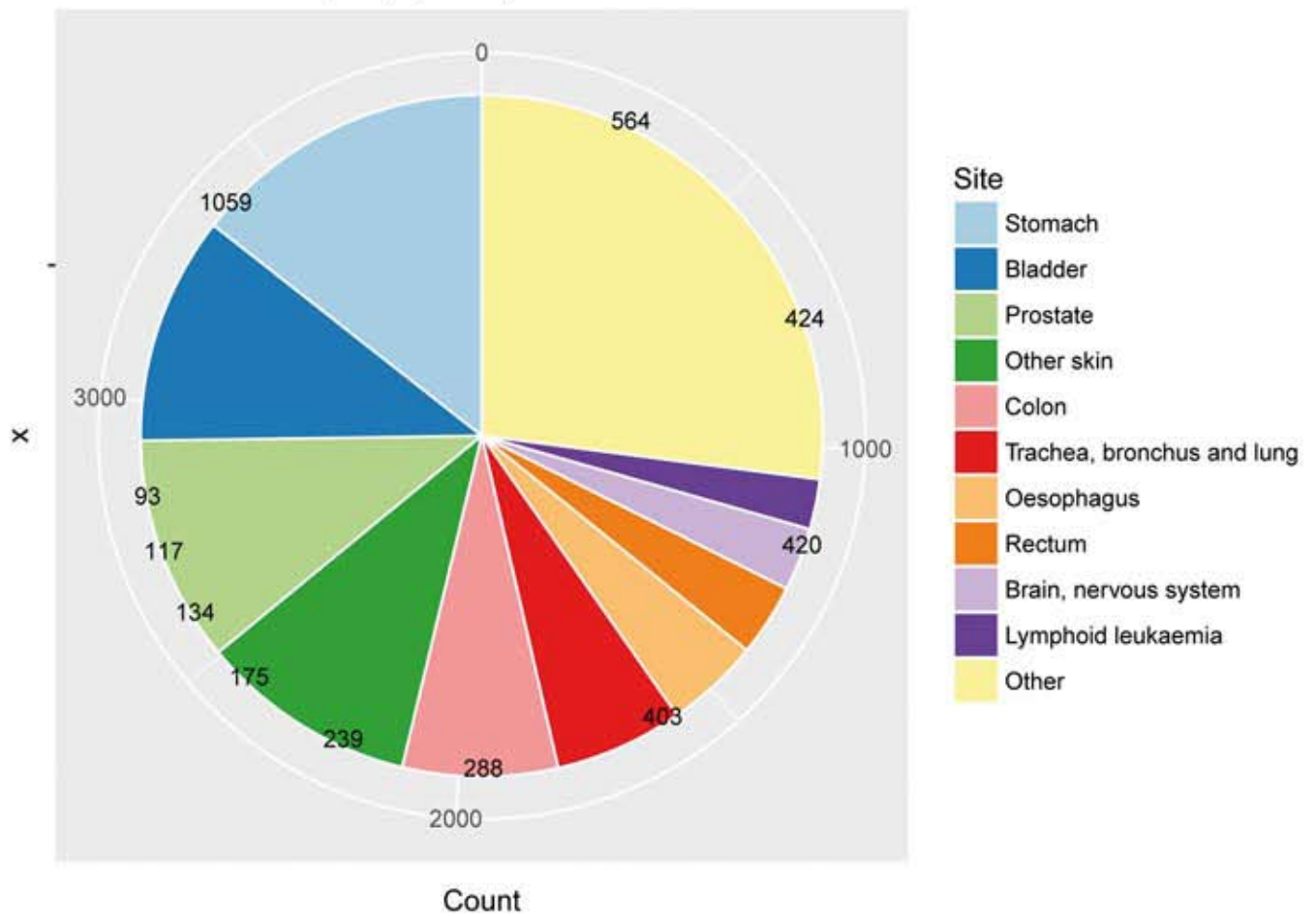


Figure 74.

Top 10 by CASES,
Tabriz Cancer Registry (1395), excluding C44, Female

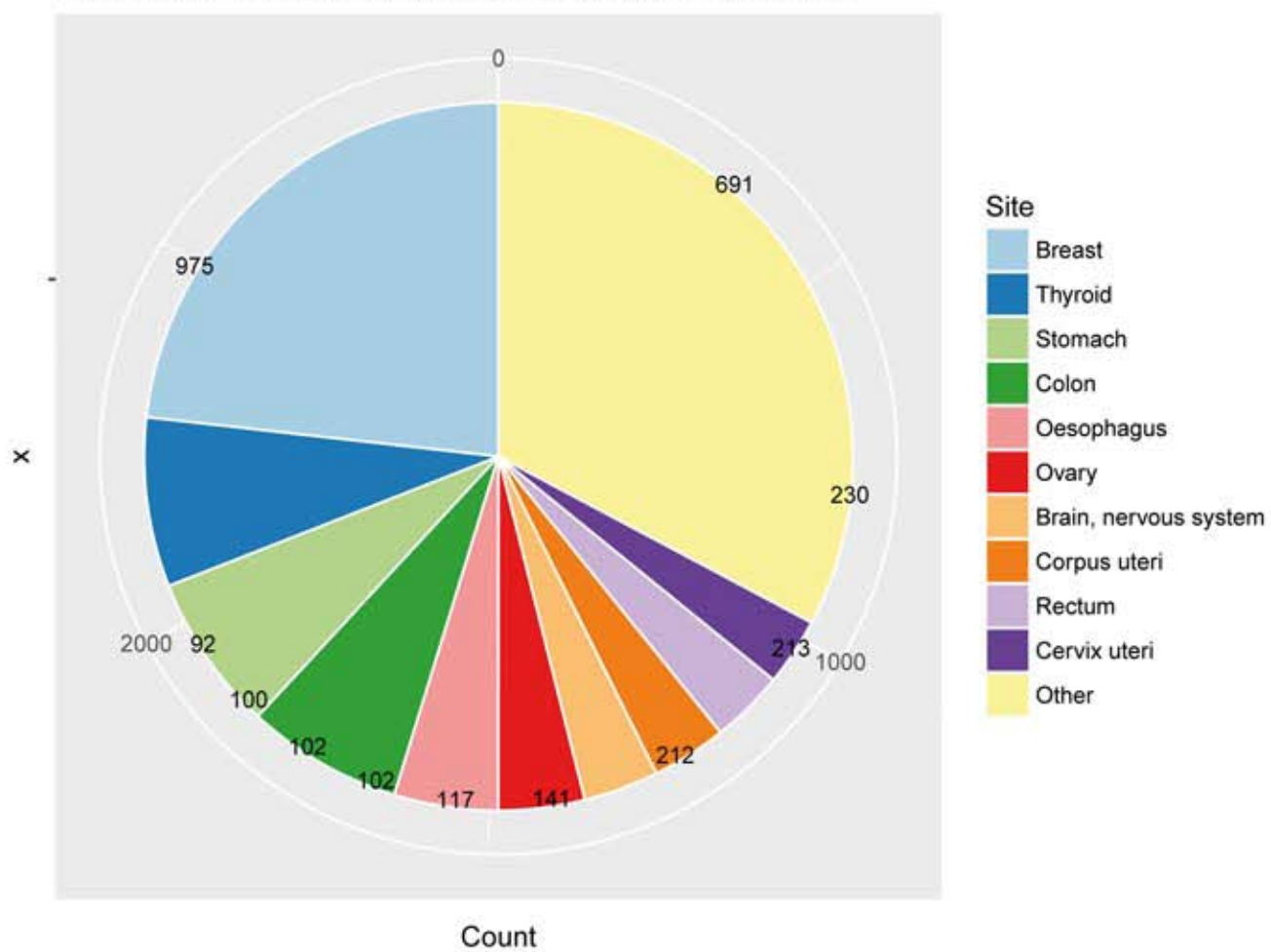


Figure 75.

Top 10 by CASES,
Tabriz Cancer Registry (1395), excluding C44, Male

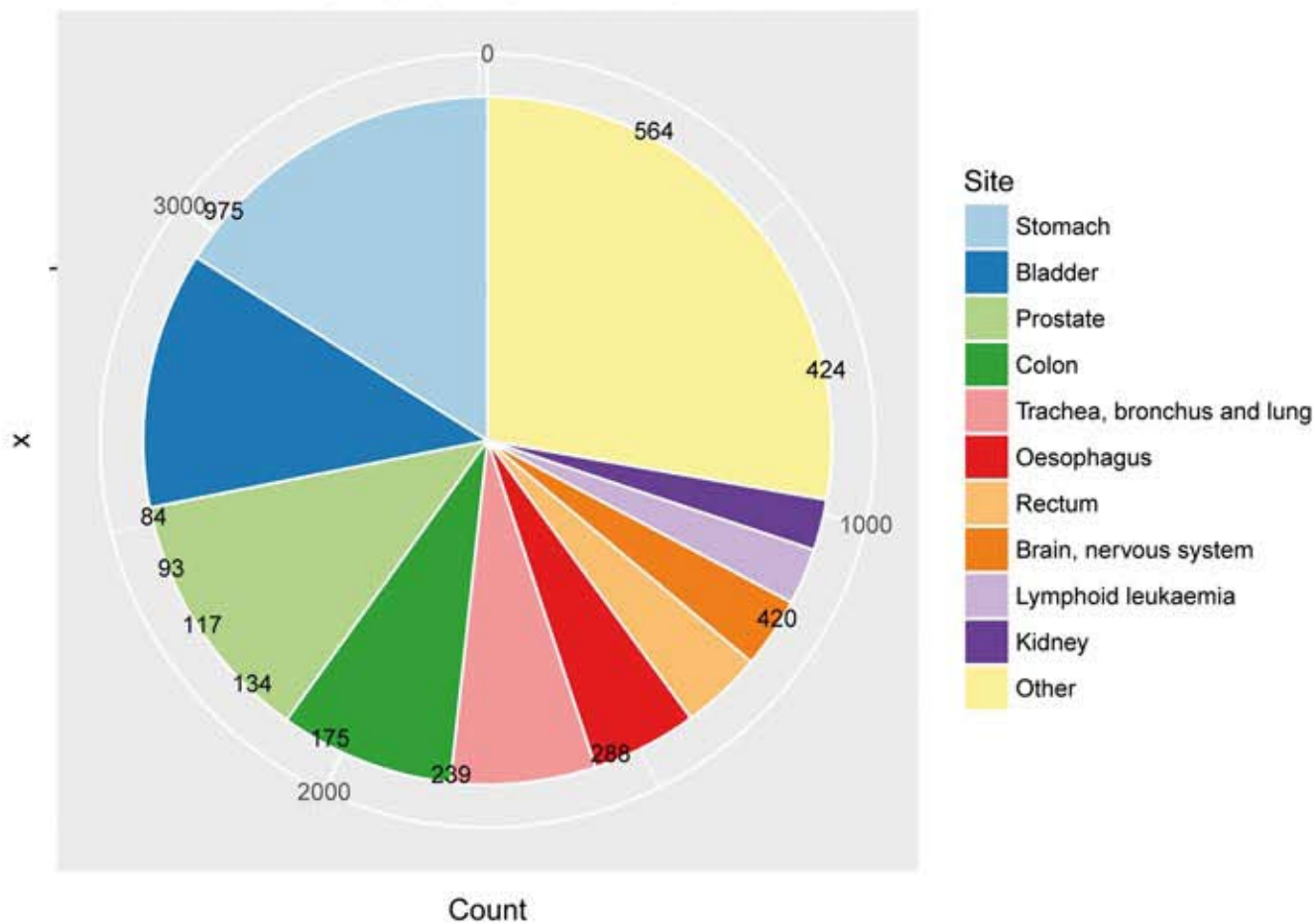


Figure 76.
Tabriz Cancer Registry (1395),
Female

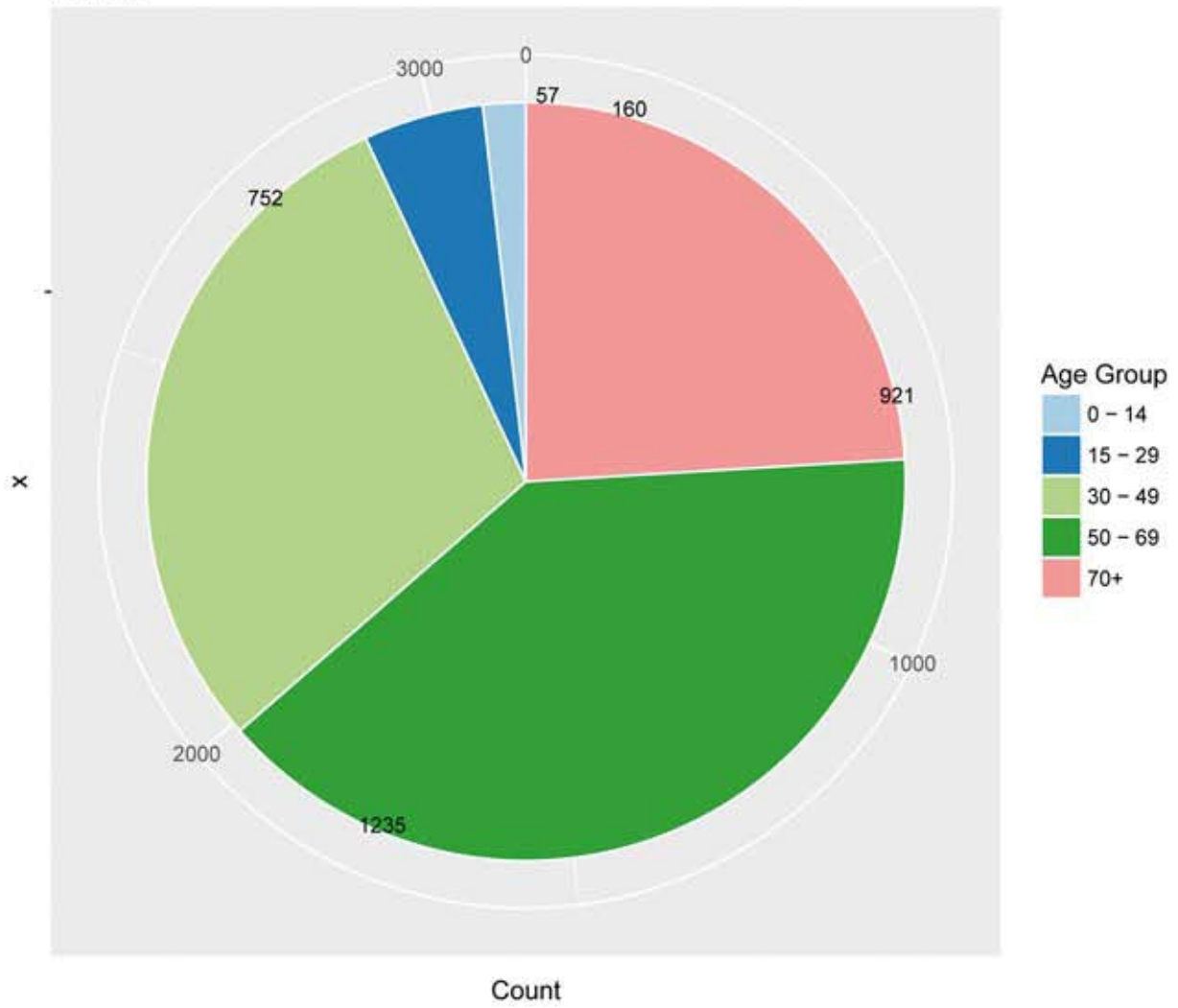


Figure 77.
Tabriz Cancer Registry (1395),
Male

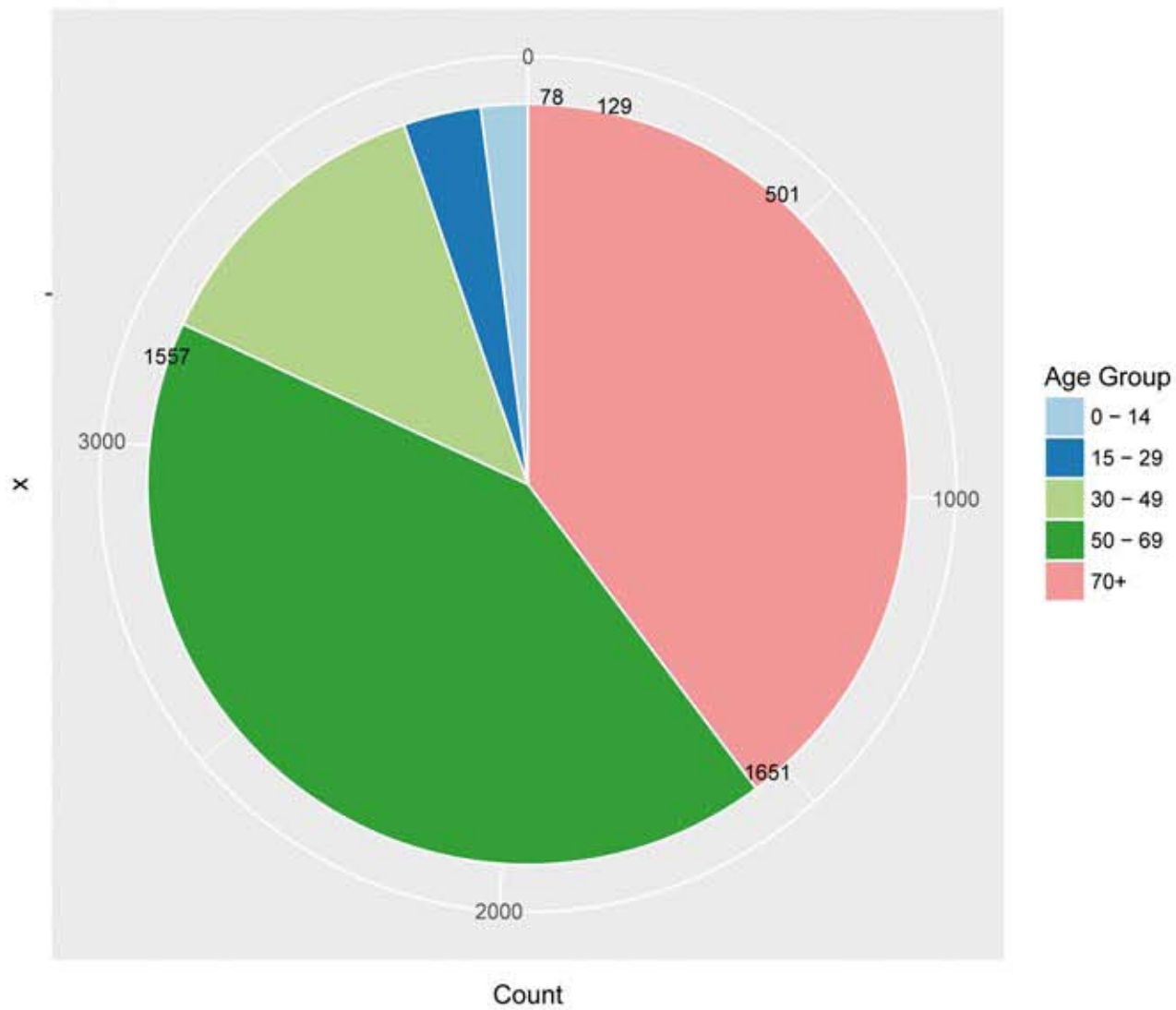


Figure 78.

Tabriz Cancer Registry (1395), excluding C44,
Female

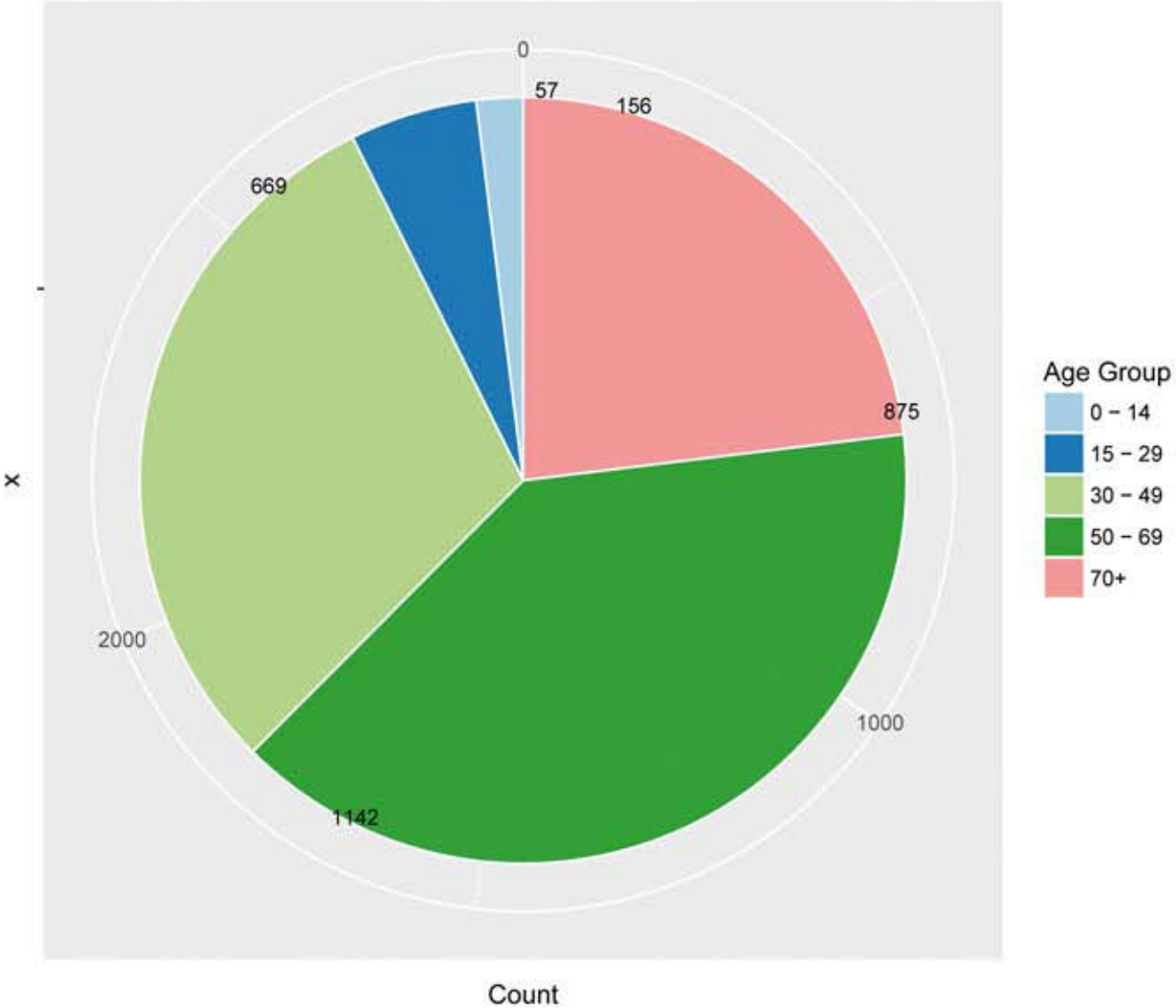
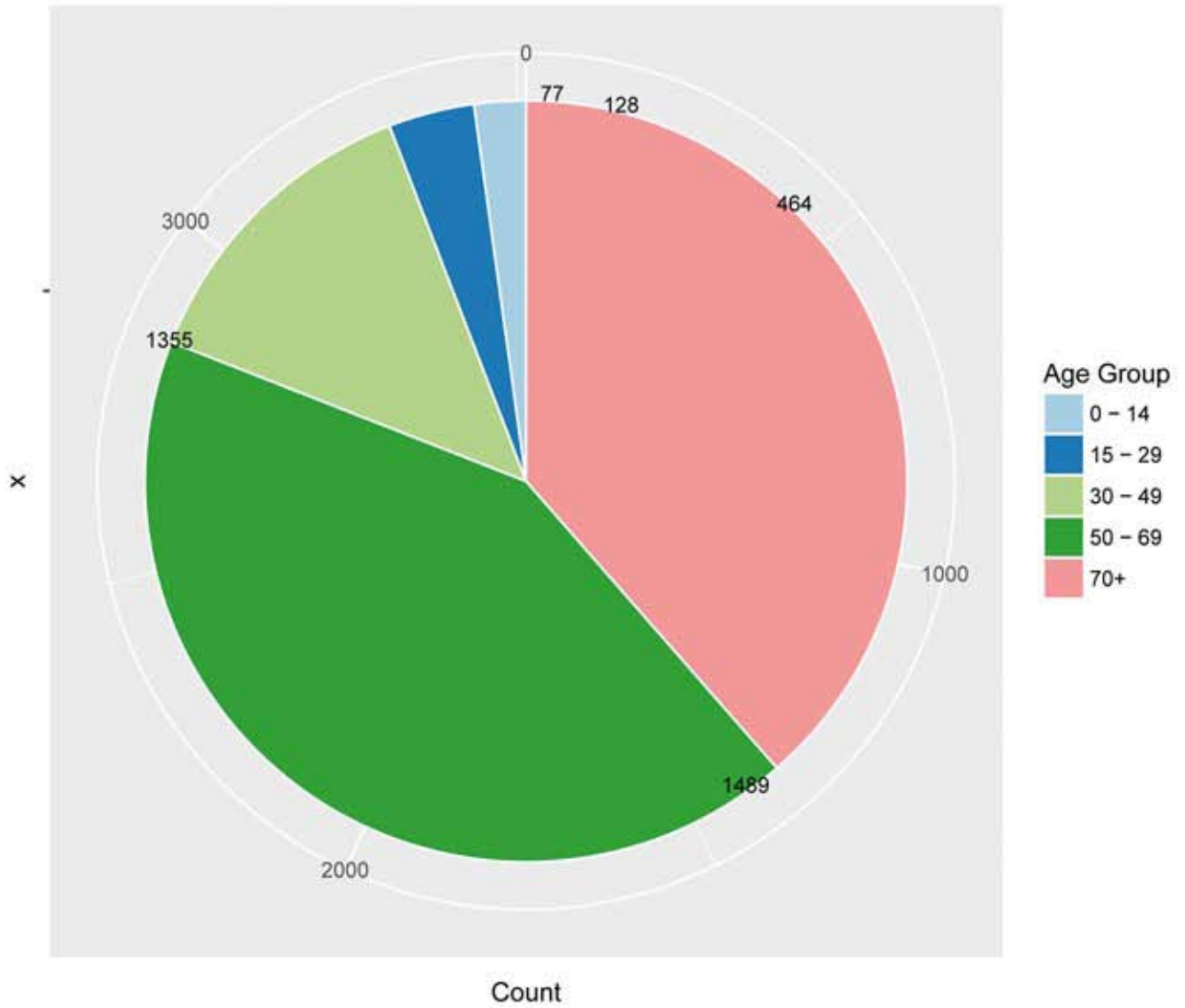


Figure 79.

Tabriz Cancer Registry (1395), excluding C44,
Male



References

- 1) Fitzmaurice C. Global, Regional, and National Cancer Incidence, Mortality, Years of Life Lost, Years Lived With Disability, and Disability-Adjusted Life-years for 32 Cancer Groups, 1990 to 2015 : A Systematic Analysis for the Global Burden of Disease Study. *JAMA Oncol.* 548-524 :(4)3: 2017.
- 2) Somi MH, Farhang S, Mirinezhad SK, Naghashi S, Seif-Farshad M, Golzari M. Cancer in East Azerbaijan, Iran: results of a population-based cancer registry. *Asian Pacific journal of cancer prevention : APJCP.* 2008 Apr-Jun;30-327:(2)9. PubMed PMID: 18712985.
- 3) Fritz A, Percy C, Jack A, Shanmugaratnam K, Sobin L, Parkin DM, et al. *International Classification of Disease for Oncology (ICD-O). Third Edition ed.* Geneva, Switzerland World Health Organization (WHO); 252 .2013 p.

In this book, we presented the most current and reliable data for cancer incidence in northwestern Iran. The quality of the EA-PBCR is promising, and we believe that maintaining and developing this registry will establish a high-quality population-based cancer registry in the region. The results from the EA-PBCR could also be used to estimate cancer-specific incidence and mortality rates in northwestern Iran and neighboring countries, making it a potentially invaluable resource for the planning and monitoring of cancer control programs and the delivery of reliable epidemiological research.

This book is a timely update and last 2 years report of East Azarbaijan Population Based Cancer Registry and we tried our bests to provide an essential and reliable data in this book, and this involved assessing factors influencing comparability, validity, timeliness, and completeness based on IARC criteria.



IACR

International Association of Cancer Registries