



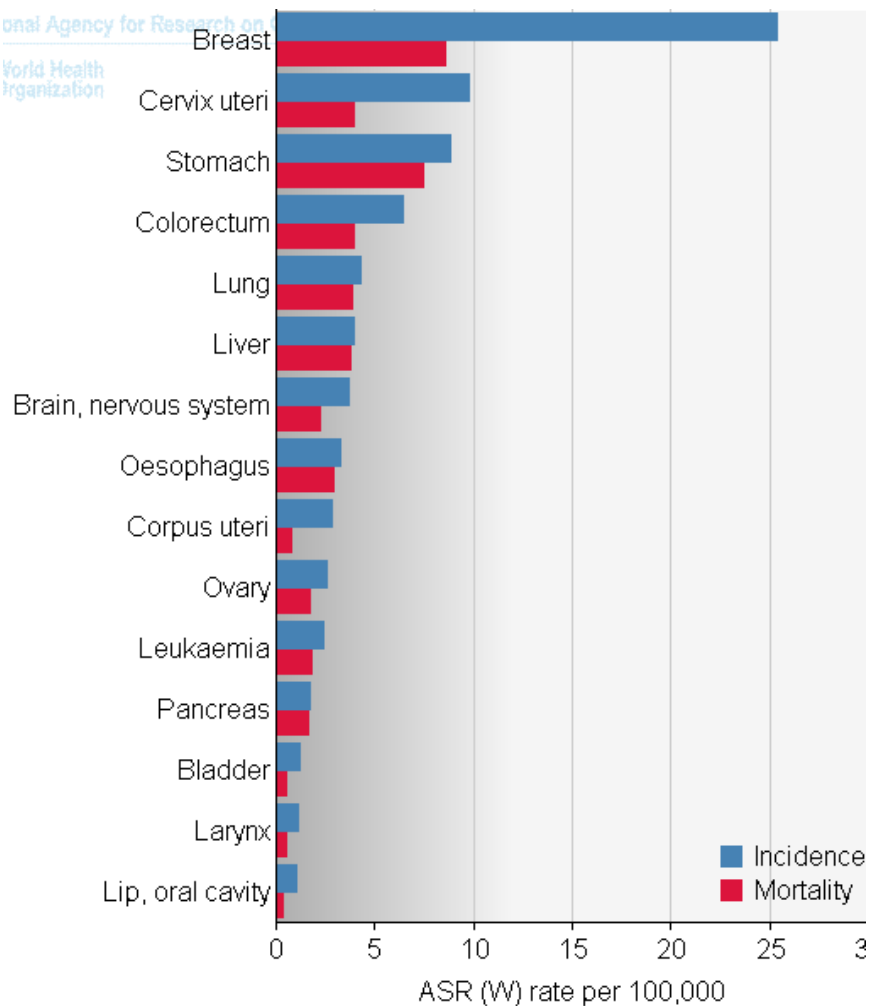
Current Oncology status in Azerbaijan and collaboration opportunities

**Asif Abasov
Antalya, 2018**

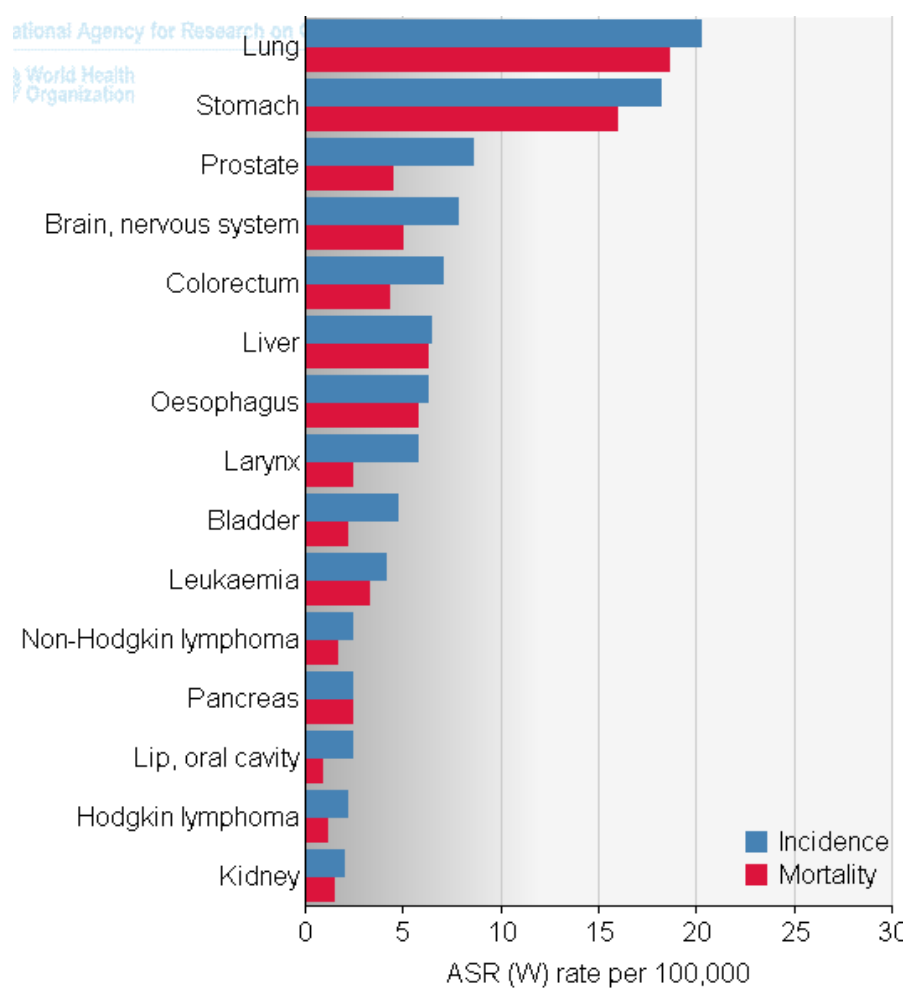


Cancer epidemiology data (Globocan-2012)

Women



Men





Cancer incidence in Azerbaijan in 2017



- Primarily diagnosed patients- **11192** (males - 5415; females - 5777)
- Of them, children - **136**;
- The most common cancers:

Males (total - 5415):

1. Lung - **1112 (20,5%)**;
2. Stomach - **853 (15,7%)**;
3. Colorectal - **547 (10,1%)**;
4. Prostate - **302 (5,5%)**.

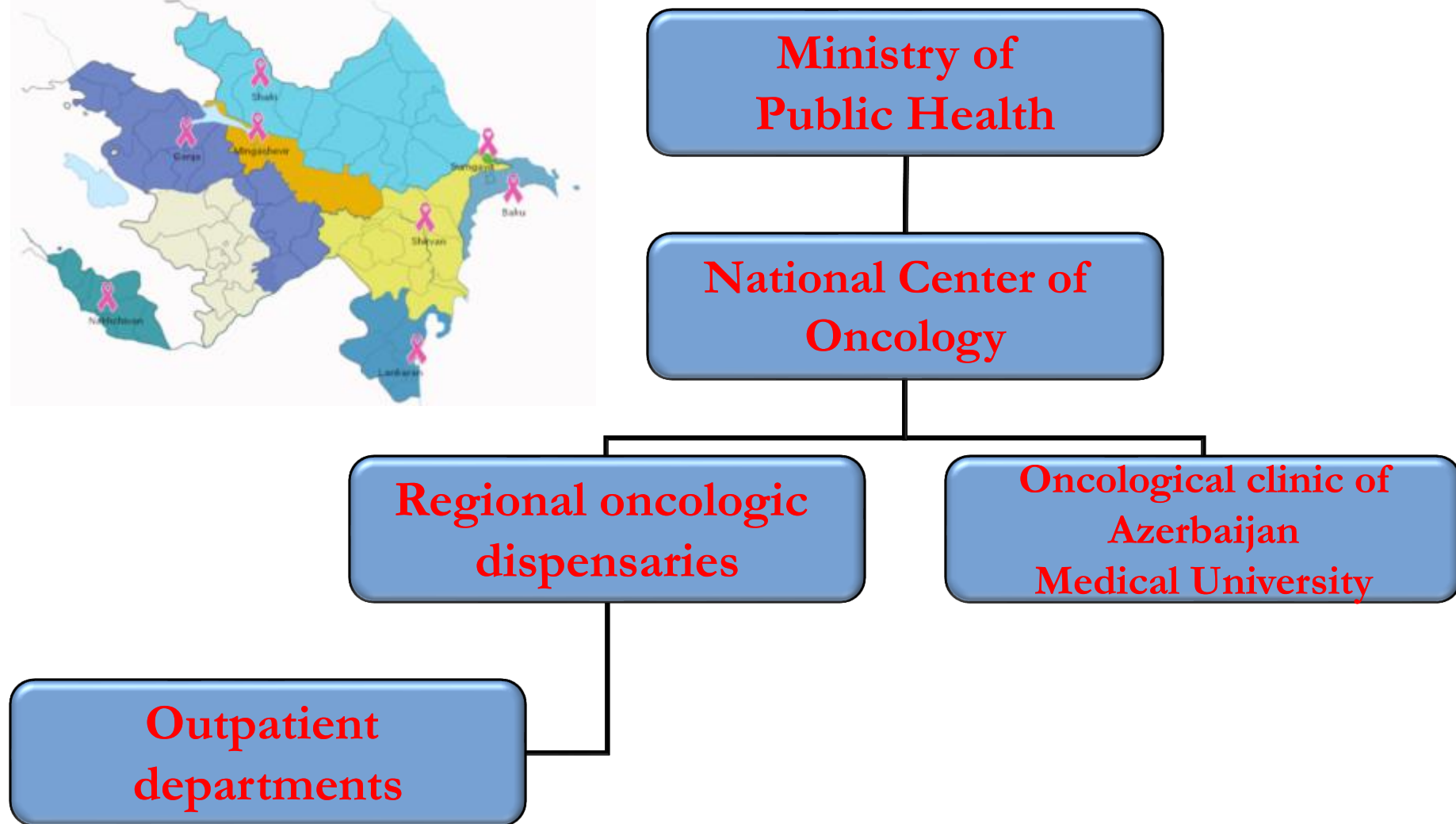
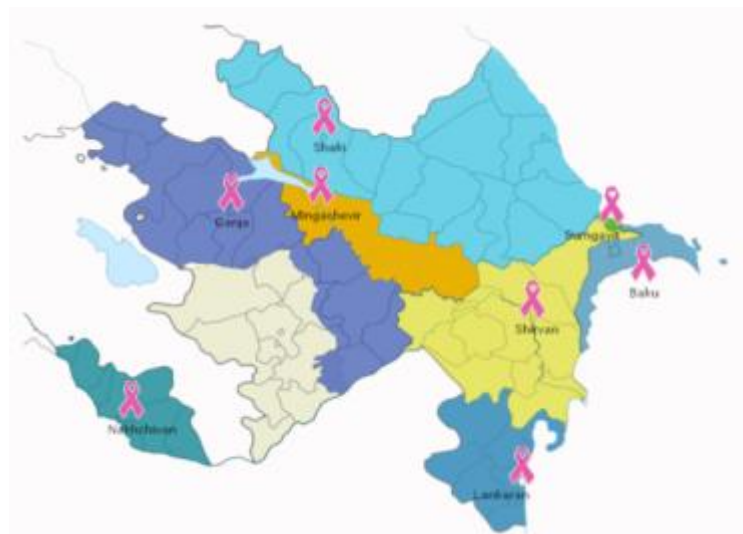
Females (total - 5777):

1. Breast - **1953 (33,8%)**;
2. Gynecological - **986 (17,1%)**;
3. Colorectal - **487 (8,4%)**;
4. Stomach - **382 (6,6%)**.

- The number of oncological patients per 100000 population – (standardized incident rate) - **114,1**;
- Total number of registered cancer patients in 2017 - **45756**;
- Died from malignant neoplasm in 2017 - **7536 (16,4%)**;
- Died during one year after diagnosed in 2017 - **3620 (32,3%)**.



Organization of oncological service in Azerbaijan (centralized type)





National Cancer Control Program (NCCP) of Azerbaijan

The main objectives of NCCP for 2013-2023 years are:

- Prevention of cancer
- Early detection
- Effective treatment
- Palliative care



*Breast cancer campaign
(Baku, 2016)*



*Cancer awareness campaign
(Baku, 2011)*



NCCP Azerbaijan

- Plan for 2013-2023
- Priorities: prevention and early detection (higher priority) and treatment
- Ways: information and education of population (media: TV, radio, mass actions, booklets, magazines etc.)
- Pre-employment and periodical check-ups
- Screenings (adequate cover of underserved and distant regions) from 2007

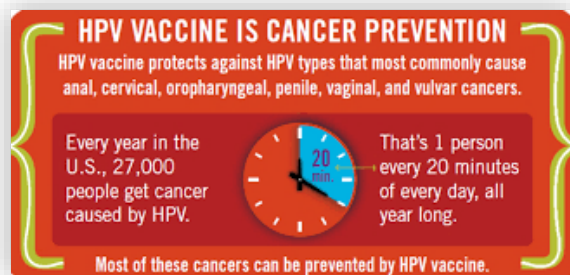
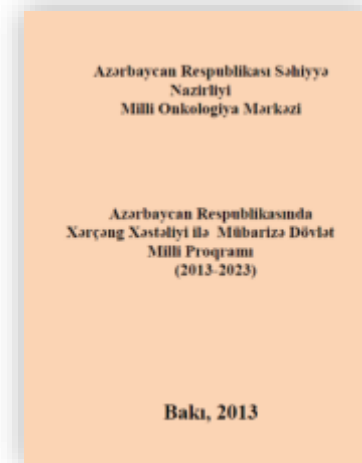


Mobile screening units for underserved regions (include US, Mammography, X-rays, Gynecological, Laboratory, General examination sections)



Cancer prophylaxis and early diagnostics

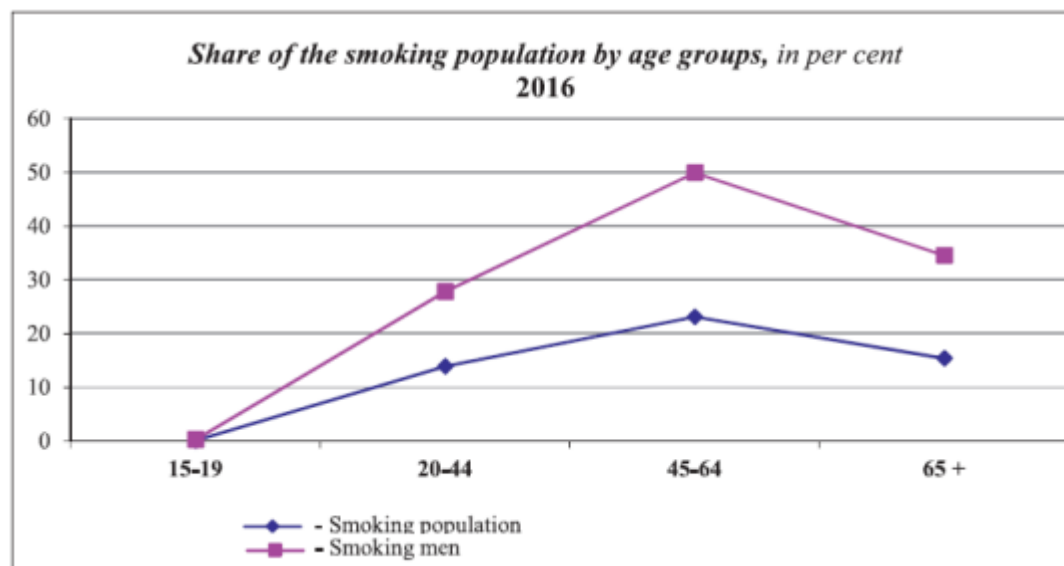
- Project on HPV vaccination was implemented.
- Modern cancer register was created.
- Promotion of healthy lifestyle.
- Screening for breast, prostate, uterine cervical cancer.





Tobacco use control

- During last years more than 10 laws have been passed against smoking:
- The Law of the Republic of Azerbaijan on limiting the use of tobacco products.
- The Law "On Restricted Use of Tobacco Products" 29 Dec 2017.
- Decree №192 Baku, May 1, 2018 - "Basic directions and methods of education of the population on the harmful effects of tobacco use and the harmful effects of tobacco smoke on the environment“
- Decree №127 Baku, April 3, 2018 - Passed a law banning smoking in public places

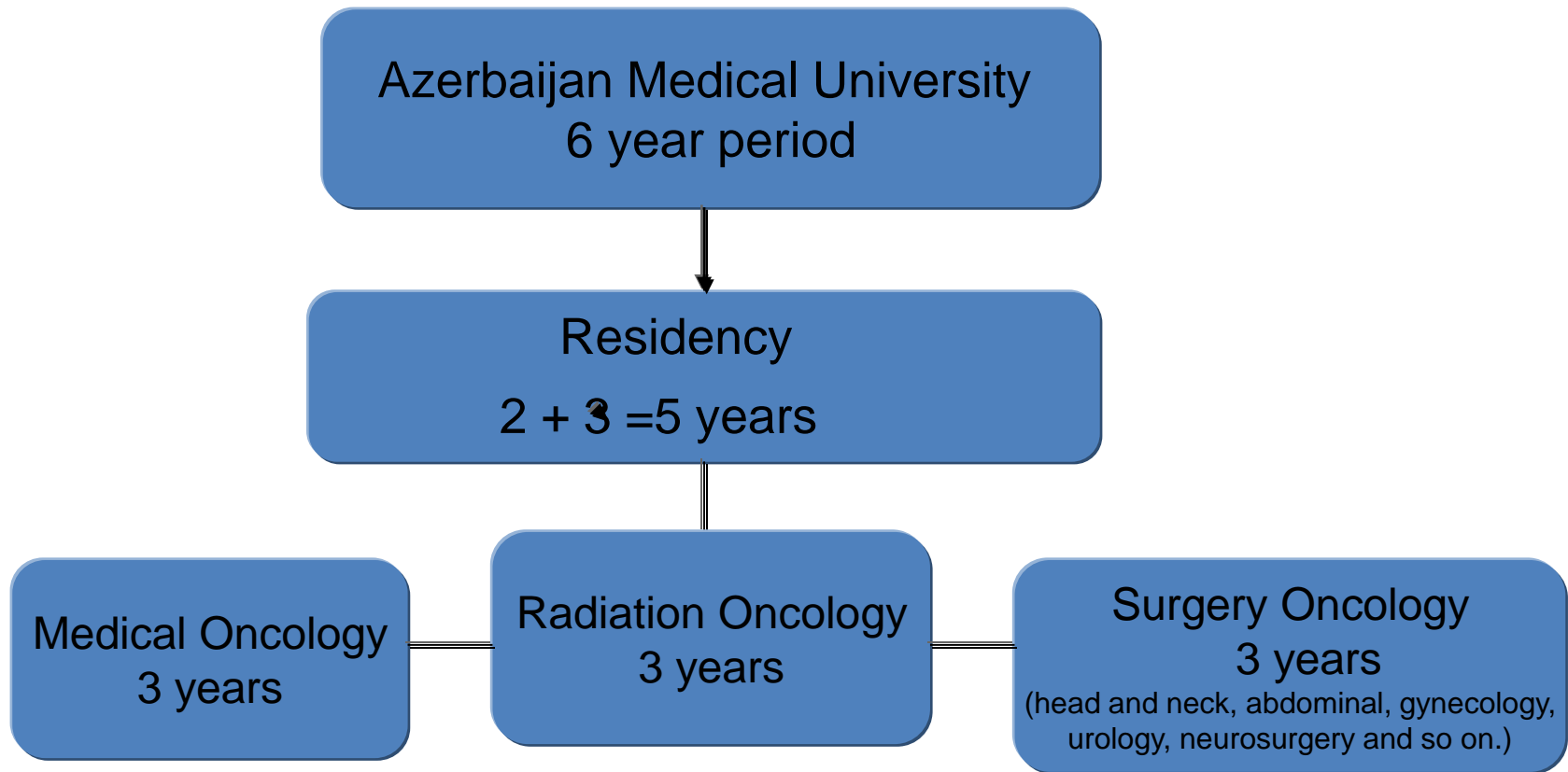


STATE STATISTICAL COMMITTEE OF THE REPUBLIC OF AZERBAIJAN.

Statistical yearbook of Azerbaijan, Baku, 2017



Stages of Oncology Education in Azerbaijan



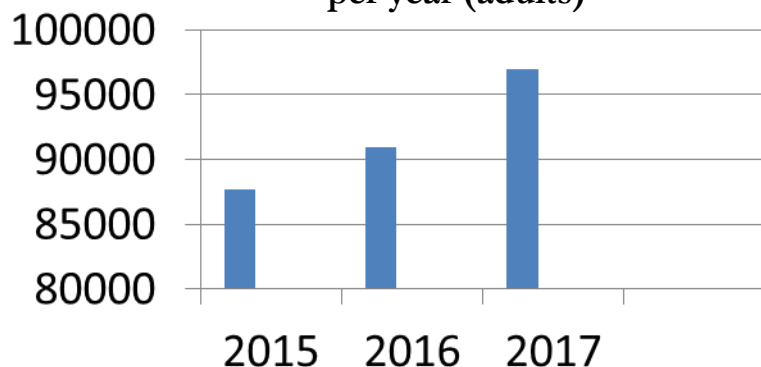


Effective treatment: National Center of Oncology (www.mom.gov.az)

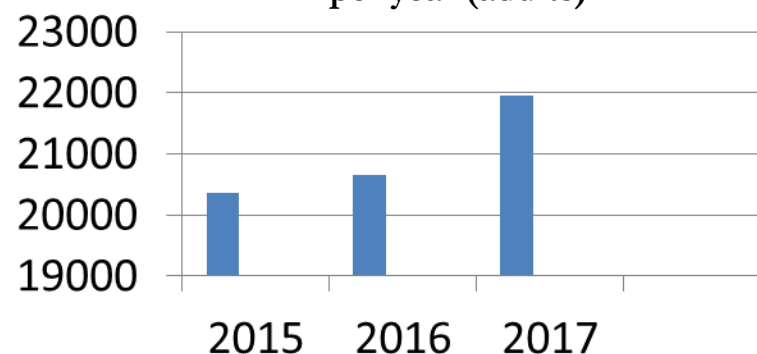
- A leading specialized scientific research institute in the system of oncological service of the Republic
- **1050 Beds, 27 Clinical Departments**
- Clinics for Pediatric Oncology Care
- ≥ 90000 patients (admissions) per year
- Full spectrum of diagnostic, treatment and follow up
- Cancer screenings
- Scientific researches
- Education of specialists



Average number of patients visit
per year (adults)



Average number of inpatients
per year (adults)





**POLİKLİNİKA VƏ
DİAGNOSTİKA KÖRPUSU
OUTPATIENT AND
DIAGNOSTICS BUILDING**
Ümumi sahəsi:
Total area: 15608 m²

**MÜALİCƏ
KÖRPUSU
THERAPY
BUILDING**
Ümumi sahəsi:
Total area: 18200 m²

**RADIOLOGİYA
KÖRPUSU
RADIOLOGY
BUILDING**
Ümumi sahəsi:
Total area: 5850 m²

**CƏRRAHİYƏ
KÖRPUSU
SURGERY
BUILDING**
Ümumi sahəsi:
Total area: 22800 m²

**UŞAQ ONKOLOJİ
KÖRPUSU
PEDIATRIC ONCOLOGY
BUILDING**
Ümumi sahəsi:
Total area: 5200 m²

**ŞUA AVADNLIQLARI
KÖRPUSU
RADIOLOGICAL EQUIPMENT
BUILDING**
Ümumi sahəsi:
Total area: 800 m²

**BUNKER VƏ YARDIMÇI
KÖRPUS
BUNKER AND ANCILLARY
BUILDING**
Ümumi sahəsi:
Total area: 490 m²



National Center of Oncology

(www.mom.gov.az)



Treatment:

- ✓ Surgery: 4000-4500 patients;
- ✓ Chemotherapy: 13 500-14 000 patients;
- ✓ Radiotherapy: 2500-3000 patients;



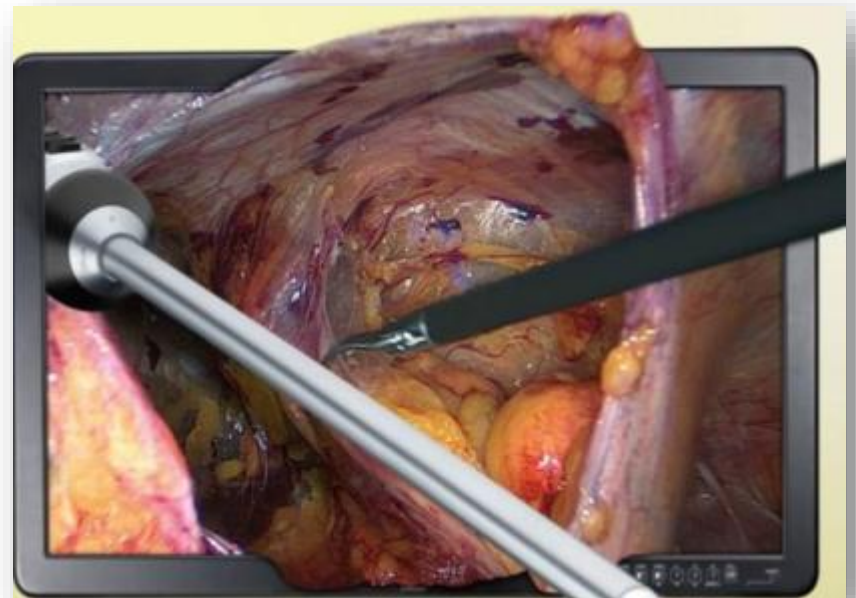
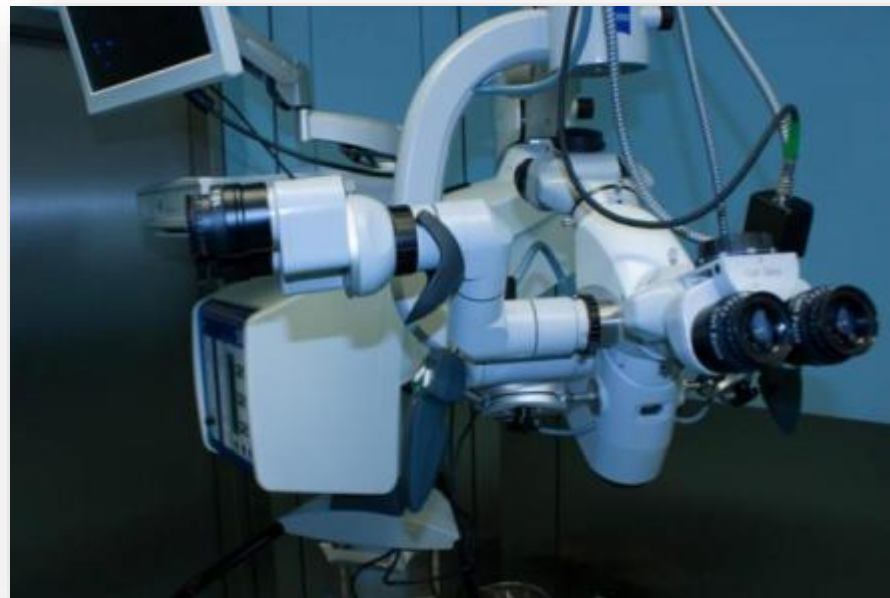
Diagnostic equipment:

- ✓ 4 CT - SIEMENS \ TOSHIBA
- ✓ 4 MRI - SIEMENS \ TOSHIBA
- ✓ 20 USG - TOSHIBA \ MINDRAY \ PHILIPS \ SAMSUNG
- ✓ 2 Mammography machine- SIEMENS \ TOSHIBA
- ✓ 1 PET/CT – SIEMENS
- ✓ 1 SPECT/CT
- ✓ 3 ECG machine - SIEMENS \ MEDISON
- ✓ 1 Angiography machine - SHIMADZU



Operating Theatre







Intensive Care Unit

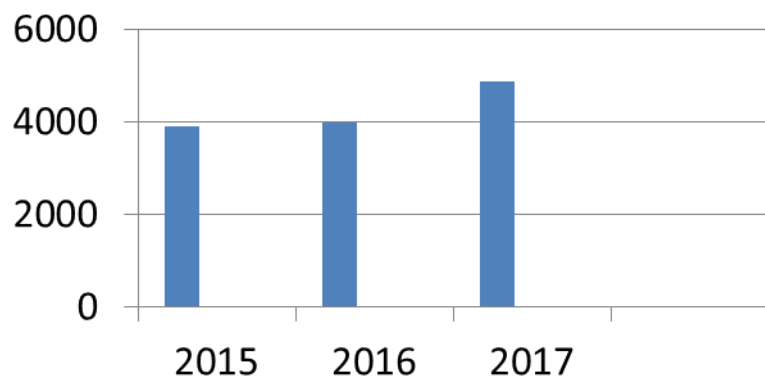




Pediatric clinic



Average number of patients visit
per year (children)





Cooperation



Cooperation agreement signed between National Center of Oncology of Azerbaijan Republic and **MD Anderson Cancer Center of USA** (15 November 2015).



Cooperation Agreement Signed Between National Center of Oncology of The Ministry of Health of Azerbaijan Republic and **Orfit Industries of Belgium** (19 January 2015).



Cooperation agreement signed between National Center of Oncology of Azerbaijan Republic and **Varian Medical Systems of USA** (08 November 2014) – Reference/Training Center.



Other Institutions - **Turkey, Israel, Austria, Germany.**





On March 15, 2015 memorandum was signed between the NCO and the MD.AndersonCancer Center (USA)





IAEA Technical Cooperation Projects



AZB6002 Upgrading Radiation Oncology in the National Oncology Centre; 2003-2007;

AZB6003 Introducing Modern Nuclear Medicine Activities and Techniques at the Oncological Research Centre; 2007-2009;

AZB6004 Introduction of High Energy Beam Radiotherapy for Oncology Patients; 2007-2009;

AZB6006 Upgrading Cancer Treatment Infrastructure by a Single Mode Linear Accelerator; 2009-2012;

AZB6009 Improving Quality of Radiotherapy Service at the National Centre of Oncology; 2014-2016

AZB6010 Enhancing Cancer Treatment and Diagnosis Capacity; 2016-2017

AZB6011 Increasing Capacity of External Beam Radiotherapy Service of the National Centre of Oncology by Installing a High Energy Linear Accelerator; 2018-2020





Technical Cooperation Programme (AZB 6/008)

2012-2015



International Atomic
Energy Agency

**Implementation Cyclotron and PET-CT in
clinical practice in Azerbaijan**



Achievements

In April, 2016 Nuclear Medicine Centre with PET/CT diagnostics was opened. This Centre was included in program **“Research for Life - EARL”** which was founded by European Association of Nuclear Medicine.



*Acad. Jamil Aliyev and
Dazhu Yang Deputy Director of IAEA*



*Acad. Jamil Aliyev and
Yukiya Amano General Director of IAEA*





Achievements

PAST
2D RT



TODAY
3D CRT, IMRT, VMAT,
SBRT, IGBT, IGRT, SRS



TMORROW
2 more Linear Accelerators
so total 9





Overall Radiotherapy equipment on the country:

- Number of radiotherapy centres – 3
- Number of linear accelerators – 7
- Number of Co-60 units – 3
- Number of orthovoltage units – 3
- Number of brachytherapy units – 1
- Number of radiotherapy units – 13/9,8 mln (1/0,75 mln)
- Number of radiotherapy units – 13/9400 (1/876 patients)
- Number of CT-simulators – 3 (3 with respiratory gating)
- Number of treatment planning systems – 8
- Number of brachytherapy systems – 2





Radiotherapy equipment of National Center of Oncology:



- 7- linear accelerators;
- 1- brachytherapy units;
- 1- orthovoltage units;
- 1- Co-60 units;



CT-simulators:

- Siemens Somatom Multislice spiral CT (Germany, 2006) System- 1;
- TOSHIBA Aquilion LB CT (Japan, 2014)- 1;

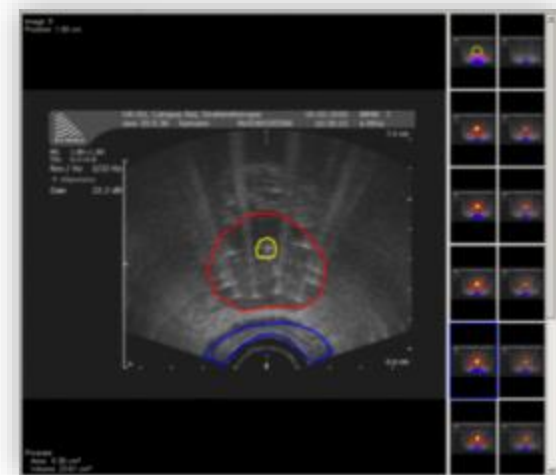
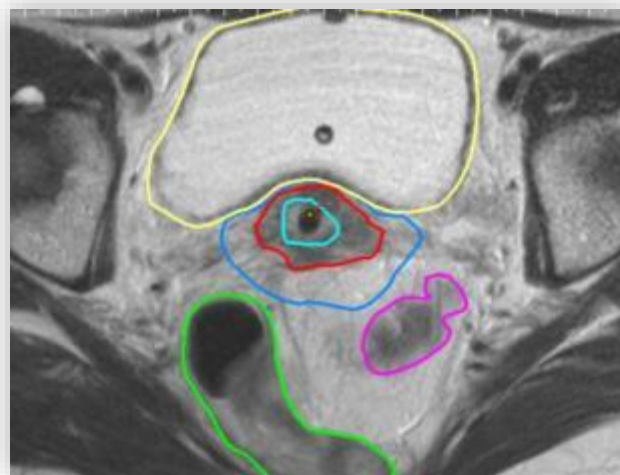
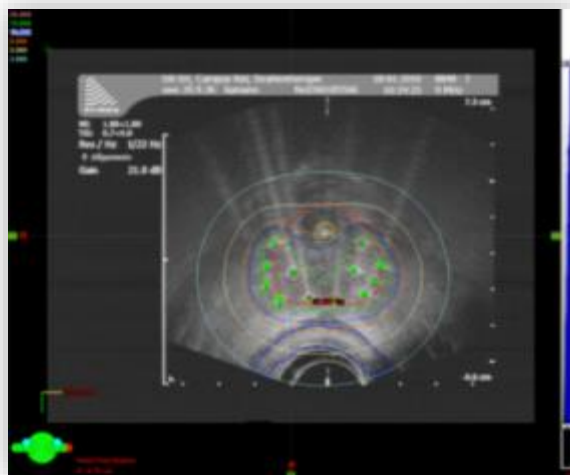
For radiation therapy:

- TERAGAM K-01 (Co60; Czech Republic, 2005)-1;
- VARIAN Gamma Med 3/24 HDR (USA, 2005,)-1;
- GULMAY Medical Orthovoltage Therapy System (UK,2006)-1;
- VARIAN Clinac Dual mode medical linear accelerator 2100CD SN 3796 (USA, 2008)-1;
- VARIAN Clinac Dual mode medical linear accelerator 2100CD SN 3940 (USA, 2009)-1;
- VARIAN Clinac Single mode medical linear accelerator UNIQUE (USA, 2012)-1;
- VARIAN Clinac Single mode medical linear accelerator 600CD (USA, 2013)-1;
- VARIAN True BEAM (Varian Medical Systems, USA, 2014)-1;
- VARIAN VitalBim Clinac Dual mode medical linear accelerator (USA, 2018)- 2;





Brachytherapy





Scientific activity



The National Center of Oncology conducts scientific activity under the supervision of Academic Jamil Aliyev. Academic Jamil Aliyev is the author of 434 scientific works, 23 books and methodical recommendations, 8 scientific inventions, 17 monographs.

At present, there are 183 scientific employees in the center.:

- 40 senior laboratory assistants.
- 10 doctors of medical science ,
- 53 doctors of philosophy ,
- 6 professors,
- 3 honored scientist etc.

Residency unit:

56 residents have been trained for six years: oncology, radiation diagnostics, radiotherapy, anesthesiology and resuscitation, laboratory work, pathological anatomy and forensic medical examination.

Last three years, 26 scientific works have been performed:

- 169 articles
- 146 abstracts
- 46 articles and abstracts -High Impact Factor.
- 3 books
- 4 manual monographs,
- methodological recommendations etc.



In 2015 NOC had been chosen full member of Union for International Cancer Control.



Thank you for your attention!

