



KazIOR

KAZAKH INSTITUTE OF ONCOLOGY AND RADIOLOGY



Overview of Cancer Screening in Kazakhstan



EURASIAN CANCER SCREENING CONFERENCE

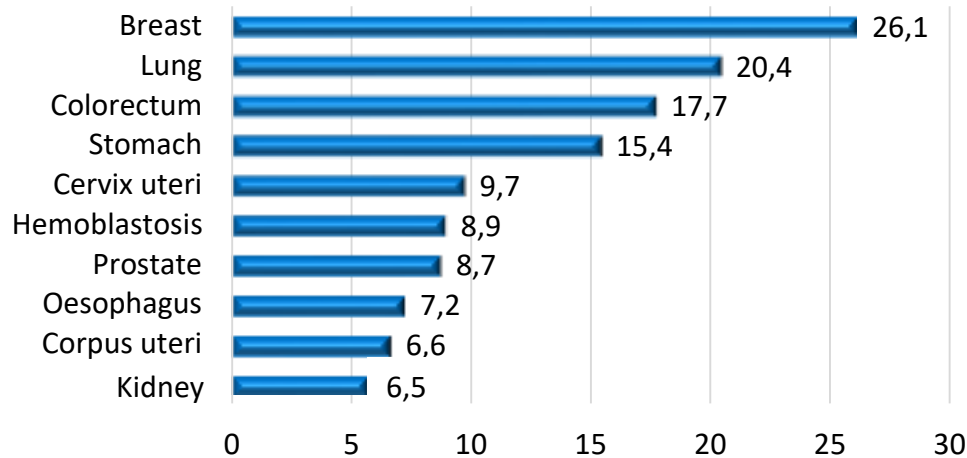
Dilyara Kaidarova

Active member of NAS RK, DSc

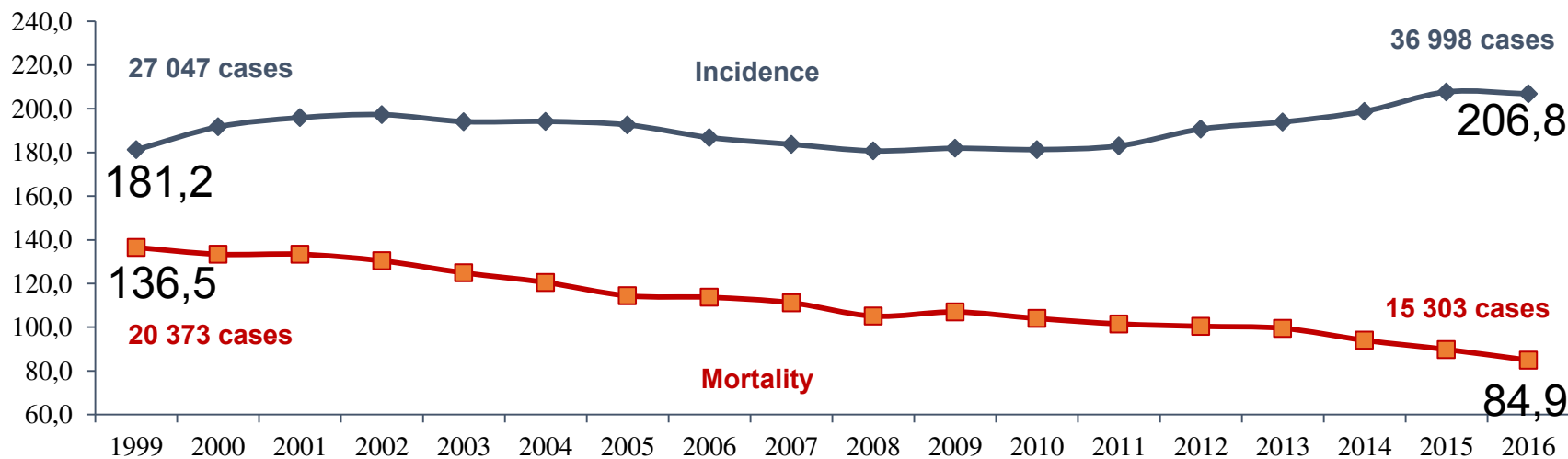
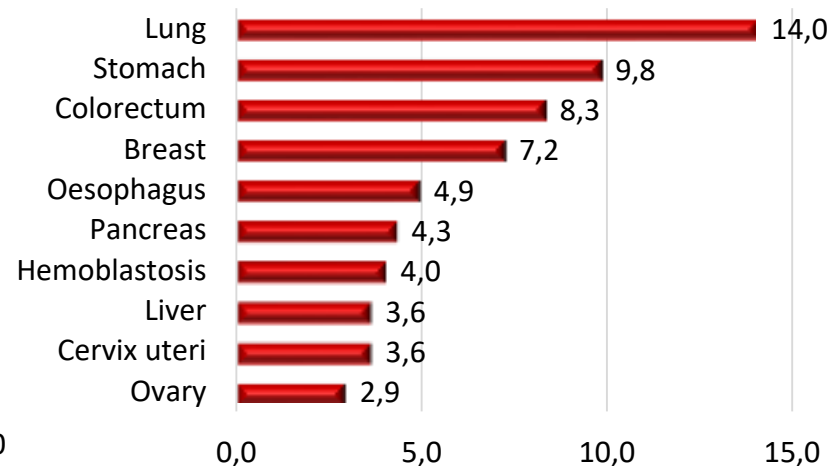
Kazakh Institute of Oncology and Radiology, Director

Cancer incidence and mortality in RK, 2016, per 100 thousand population, and their dynamics (1999-2016)

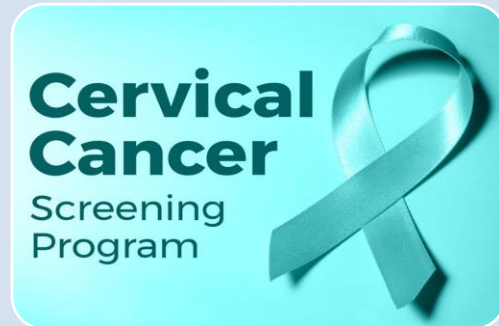
Cancer Incidence



Cancer Mortality



Cancer screening program in the Republic of Kazakhstan



Cervical Cancer
Screening
from 01.2008
Pap test
30-70 years old
Interval 4 years

Breast Cancer
Screening
from 01.2008
Mammography
40-70 years old
Interval 2 years

Colorectal
Cancer
Screening
from 06.2011
FIT (iFOBT)
50-70 years old
Interval 2 years



Cancer screening program in the Republic of Kazakhstan



Esophageal and
Stomach Cancer
Screening
2013-2017
Endoscopy
50-60 years old
Interval 2 years

Prostate Cancer
Screening
2013-2017
Definition of PSA
and its isoforms
50-66 years old
Interval 4 years

Liver Cancer
Screening
2013-2017
AFP + ultrasound
Patients with
cirrhosis of the
liver
2-4 times a year



Cytological screening



Stages

1

2008-2011 – **organizational**: normative base, purchase of equipment, informing the public, training of specialists, software

2

2012-2017 – **quality improvement**: inclusion in the screening of the age group 30 years, fluid cytology, Bethesda, national leadership

3

from 2018 – **increasing accessibility and effectiveness**: increase in target groups, outreach, improvement of software support, emphasis on the identification of precancer and its recovery

- **Equipment**: centralized laboratories of cytology with devices for liquid (18)
- **Financing**: biomaterial sampling stage (traditional and liquid), its interpretation – state budget (2.8 billion tenge or 8 million 575 thousand USD)

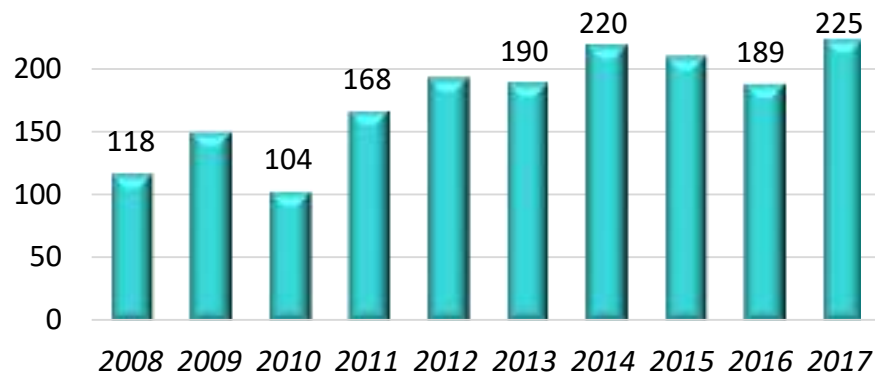


Cytological screening

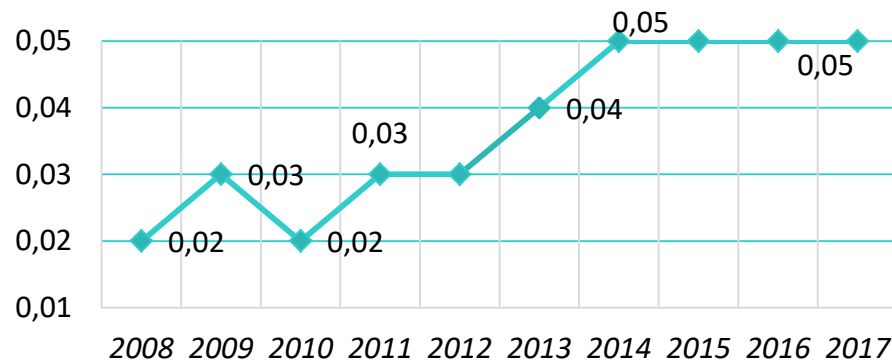
Target screening group until 2018 – women 30, 35, 40, 45, 50, 55, 60 years old



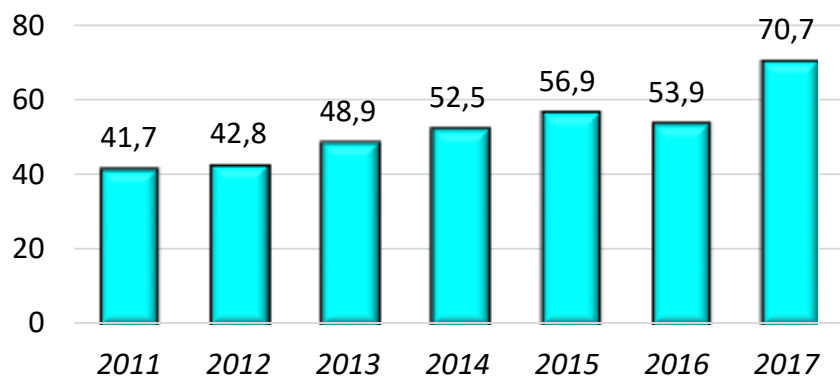
Number of cervical cancer cases, total



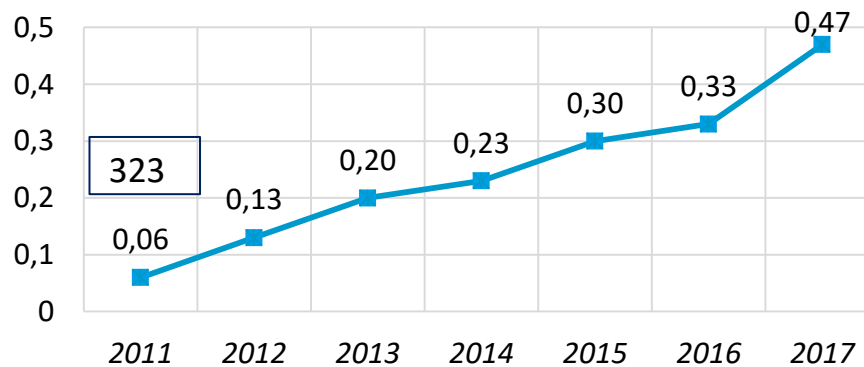
Cervical cancer detection rate, %



Stage I of cervical cancer, specific weight, %



Cervical pre-cancer detection rate, %



Cervical cancer screening problems

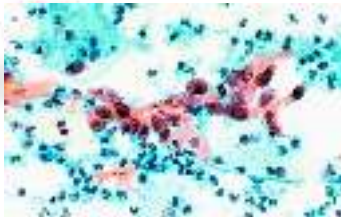
Poor- quality
sampling and
conservation of
biomaterial

Delayed delivery of
consumables for
screening

Inadequate
software for
screening

High level of cancer
detection rate.
Low level of pre cancer
detection rate

High level of interval
cervical cancer
incidence



Mammographic screening



Stages

1

2008-2011 – **organizational**: normative base, purchase of equipment, informing the public, training specialists, software

2

2012-2017 – **quality improvement**: double reading and archiving mammograms, BIRADS system, national leadership

3

from 2018 – **increasing accessibility and effectiveness** : increase in target group, coverage, improvement of program support, digitalization of screening

- **Equipment**: 235 stationary mammography rooms in polyclinics, 26 mobile mammographs, 18 mammography departments (rooms) on the basis of oncological dispensaries (regional screening clinical diagnostic department)
- **Financing**: screening mammography – local budget, advanced diagnostic phase – state budget (200 million tenge or 620 thousand USD)

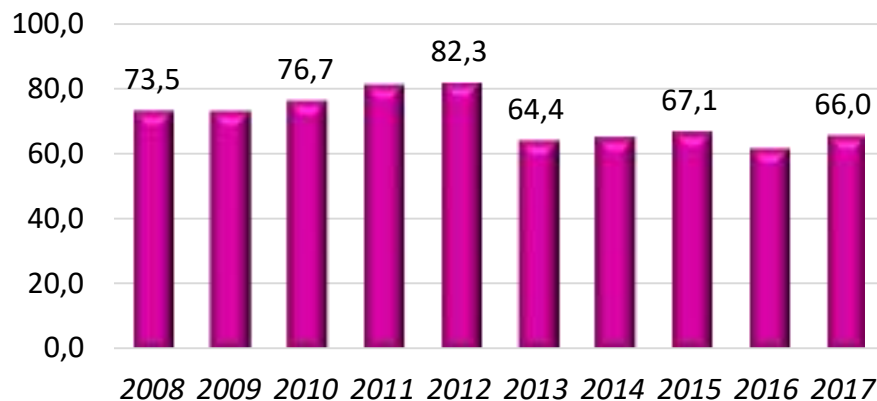


Mammographic screening

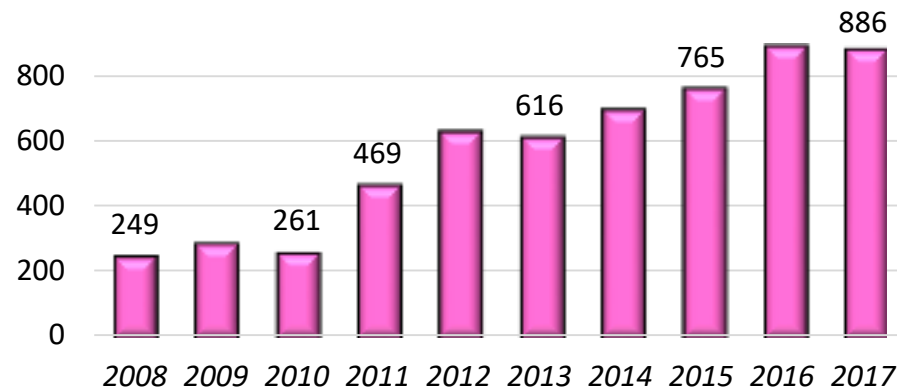
Target screening group until 2018 –
women 50, 52, 54, 56, 58, 60 years old



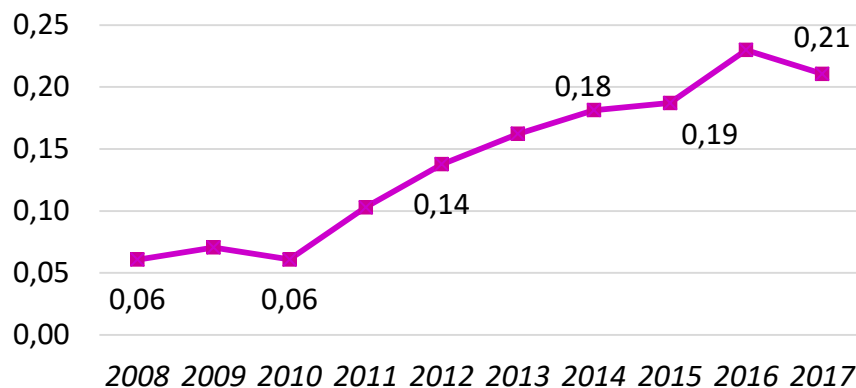
Coverage of the target group, %



Number of breast cancer cases, total



Breast cancer detection rate, %



Stage I of breast cancer, specific weight, %



Breast cancer screening problems

Obsolescence of
mammography
equipment

Digitalization of
mammographs of
has not been
completed

Inadequate
software for
screening

Deficiency of
radiologists, X-ray
laboratory staff

High incidence of
breast cancer in other
age groups



Colorectal cancer screening

Stages



1

2011-2012 – **organizational**: normative base, purchase of equipment, informing the public, training specialists, software, national leadership

2

2013-2017 – **increase in efficiency**: introduction of iFOBT (FIT), colonoscopy

3

from 2018 – **increasing accessibility and effectiveness** : increase in target group, coverage, improvement of program support, focus on ADR, enlargement of sedation during a colonoscopy

- **Equipment**: colonoscopes (143), washing machines (70)
- Regular workshops for endoscopists
- **Financing**: iFOB test + colonoscopy – state budget (1.1 billion tenge or 3 million 405 thousand USD)

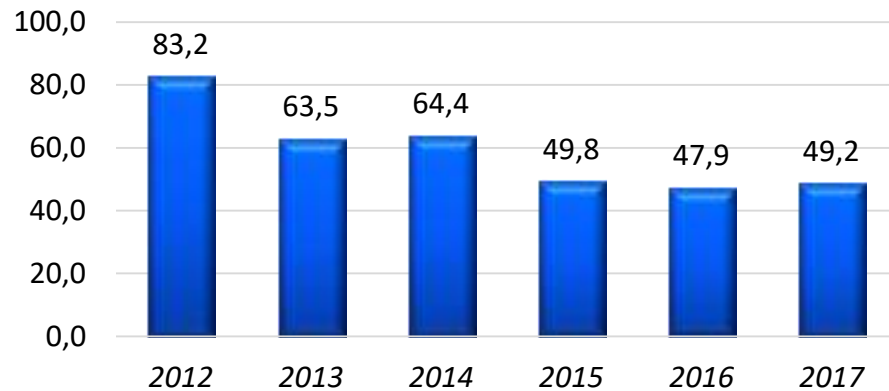


Colorectal cancer screening

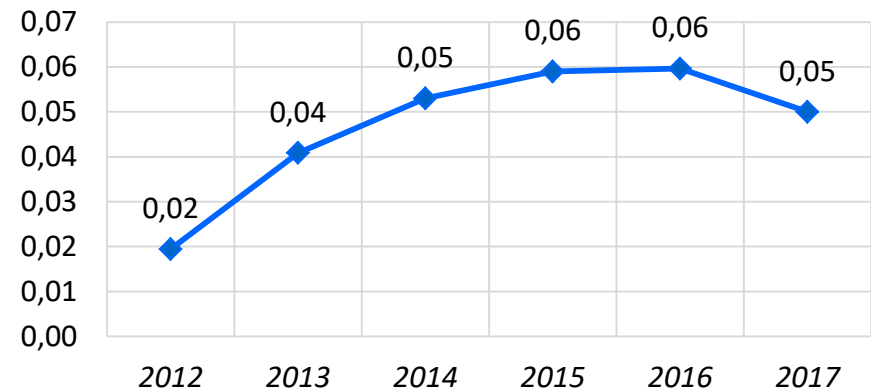
Target screening group until 2018 –
men and women 50, 52, ... 68, 70 years old



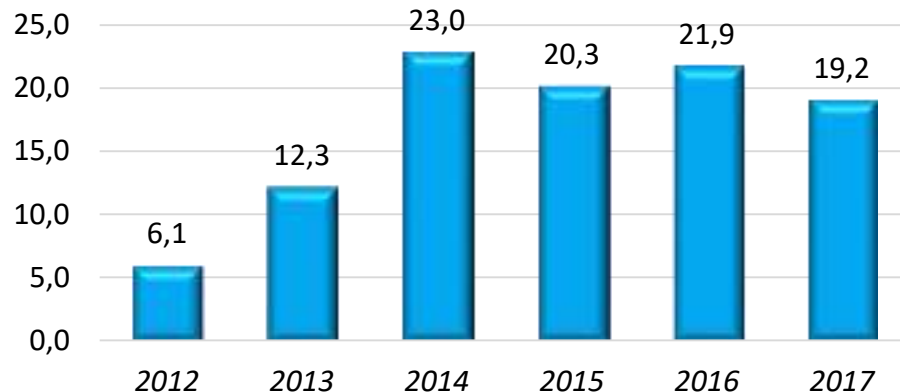
Coverage of the target group, %



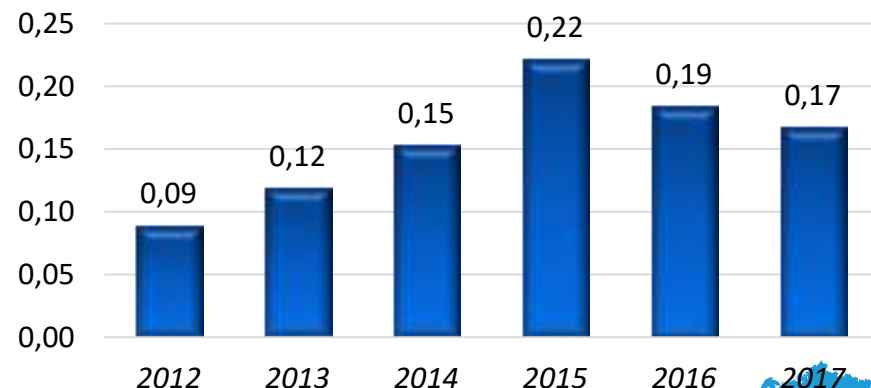
Colorectal cancer detection rate, %



Stage I of CRC, specific weight, %



Colorectal pre cancer detection rate, %



Colorectal cancer screening problems

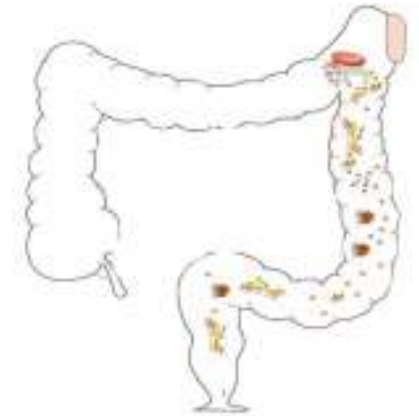
Low level of positive FIT rate.
Poor quality sampling?

High level of refusals from colonoscopy (up to 30-40%)

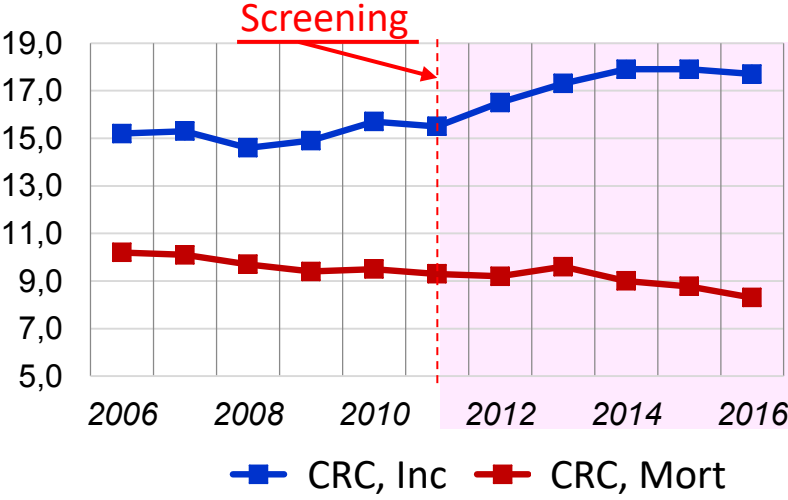
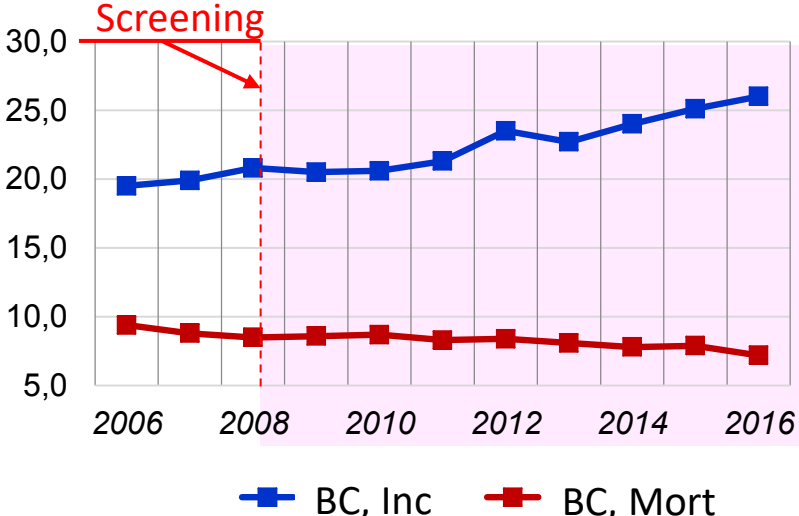
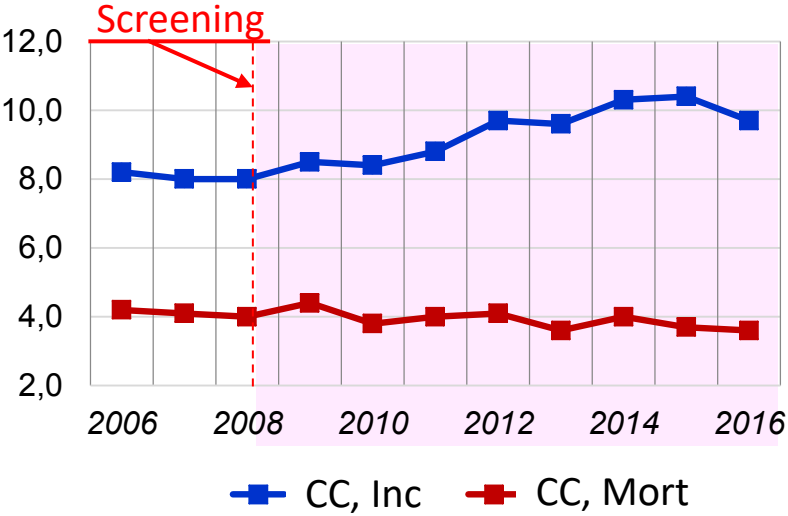
Inadequate software for screening

Pre cancer pathology:
low level of adenoma detection rate

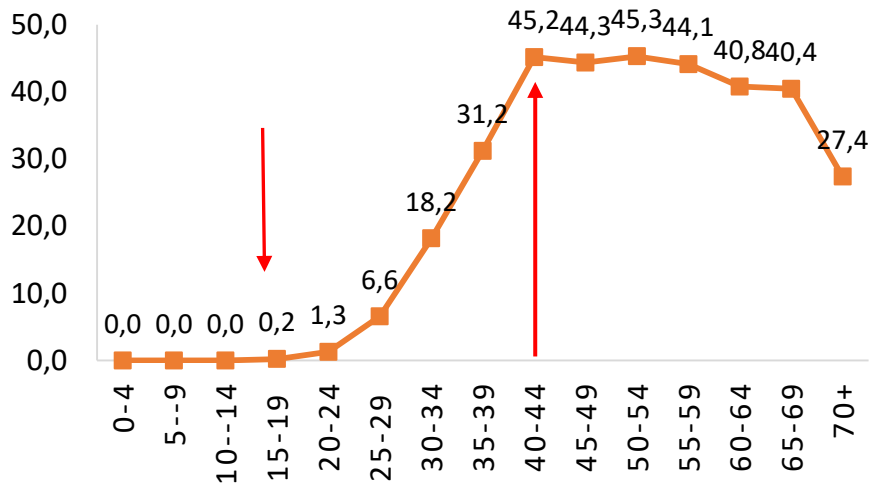
Inadequate equipment by washing machines, surgical instruments, expendables for polypectomies



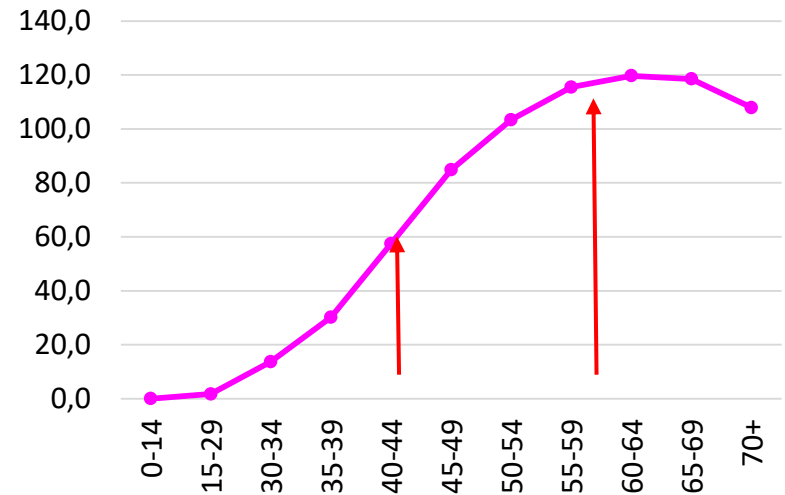
Cervical cancer, breast cancer and colorectal cancer incidence and mortality dynamics in Kazakhstan (2006-2016)



Age-specific incidence of cervical and breast cancer in Kazakhstan



Age-specific cervical cancer incidence, ‰



Age-specific breast cancer incidence, ‰



ImPACT mission overview in Kazakhstan (2016)



ImPACT mission recommendations

Cervical cancer screening

Strengthen monitoring for precancerous lesions. Consider to start HPV-based screening. Increase in coverage rate.

Breast cancer screening

Extend the age of inclusion up to 69 years. Increase in coverage rate. Finish digitization of the equipment.

Colorectal cancer screening

Strengthen monitoring for persons with identified precancerous lesions. Increase in coverage rate.

Esophageal and stomach cancer, prostate cancer and liver cancer screenings

Replace current screening by screening of high risk individuals only. Evaluate the potential harms caused by the current PSA-based screening



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Implementation of WHO and ImPACT mission recommendations

Cervical cancer screening

Age groups and coverage rate are increased.
Monitoring for precancer detection is strengthened.
The pilot of HPV-based screening is planned

Breast cancer screening

Age groups are increased (40-70 years),
increasing of coverage rate is planned.
The completion of digitalization is scheduled

Colorectal cancer screening

Age groups are increased,
increasing of coverage rate is planned.
ADR indicator is introduced

~~Esophageal and stomach cancer, prostate cancer and liver cancer screenings~~

Canceled



МИНИСТЕРСТВО
ЗДРАВООХРАНЕНИЯ
РЕСПУБЛИКИ КАЗАХСТАН



Всемирная
организация
здравоохранения



IAEA

Programme of
Action for
Cancer
Therapy

PACT



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Thank you for your attention!

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