



KazIOR

КАЗАХ ИСТИТЕТИ БІЛІМДІК АПИ РАДИОЛОГИЯ



Breast Cancer Screening in Kazakhstan



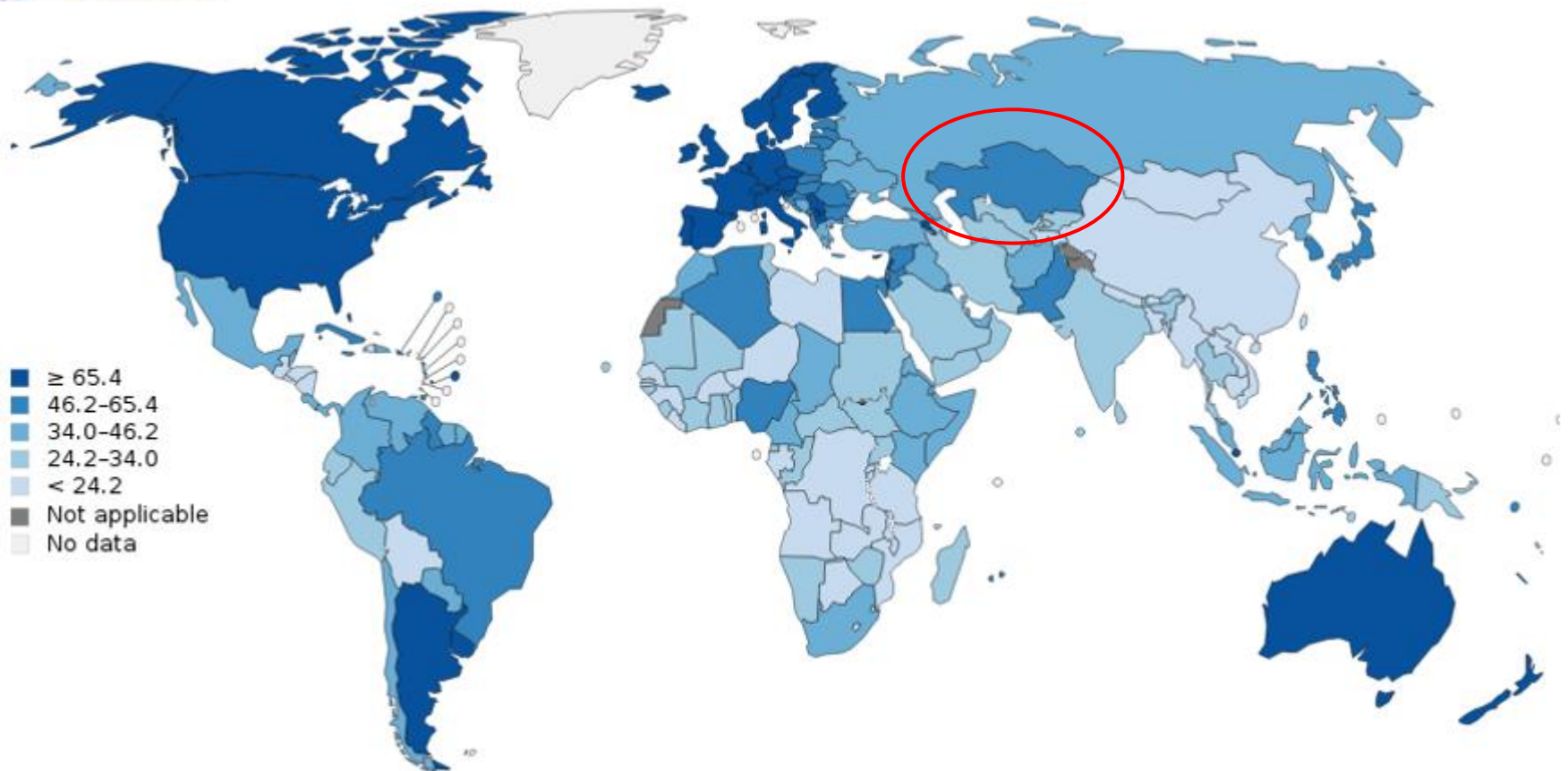
EURASIAN CANCER SCREENING CONFERENCE

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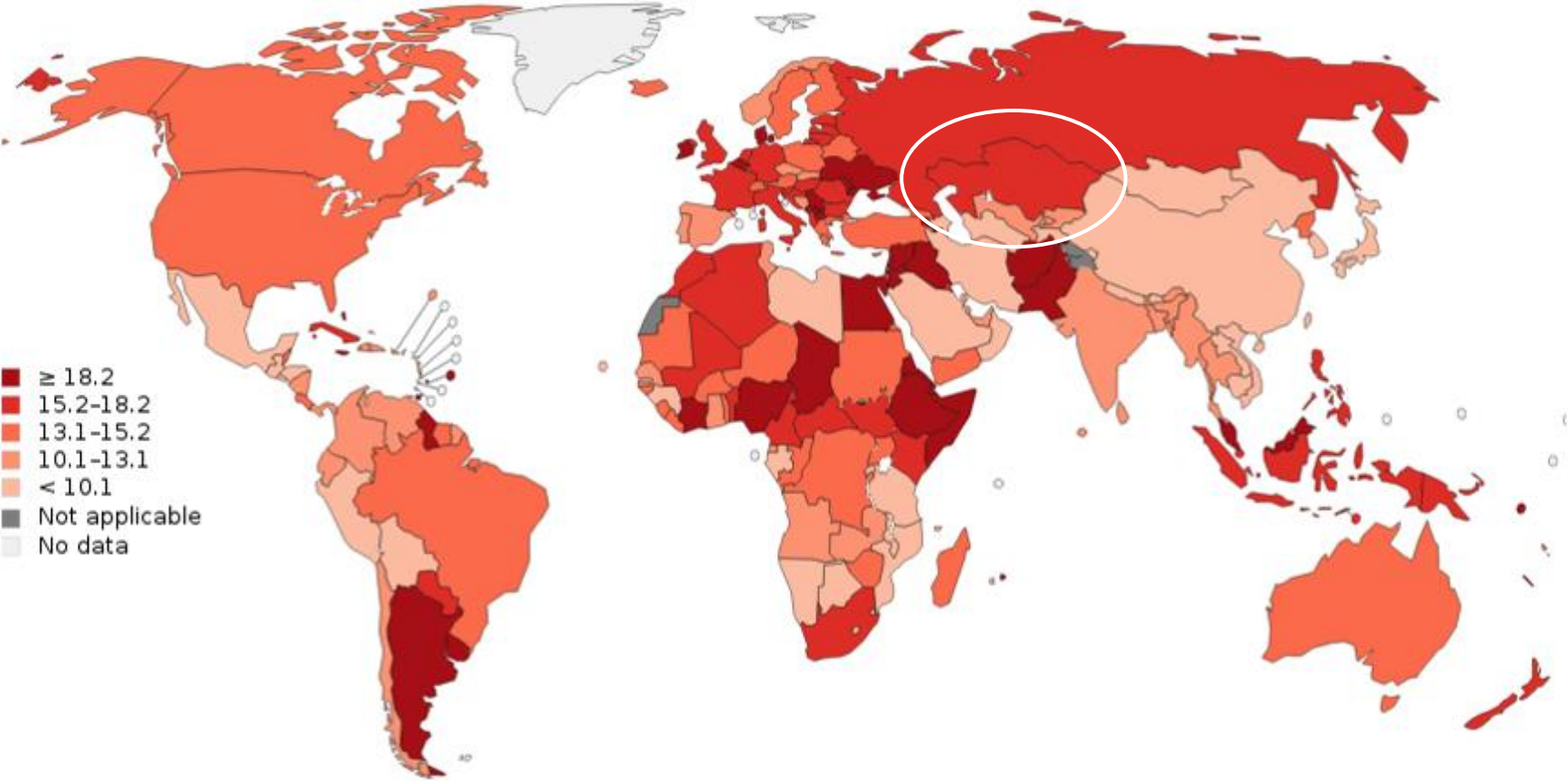
Breast cancer incidence, worldwide, Globocan, 2012

International Agency for Research on Cancer

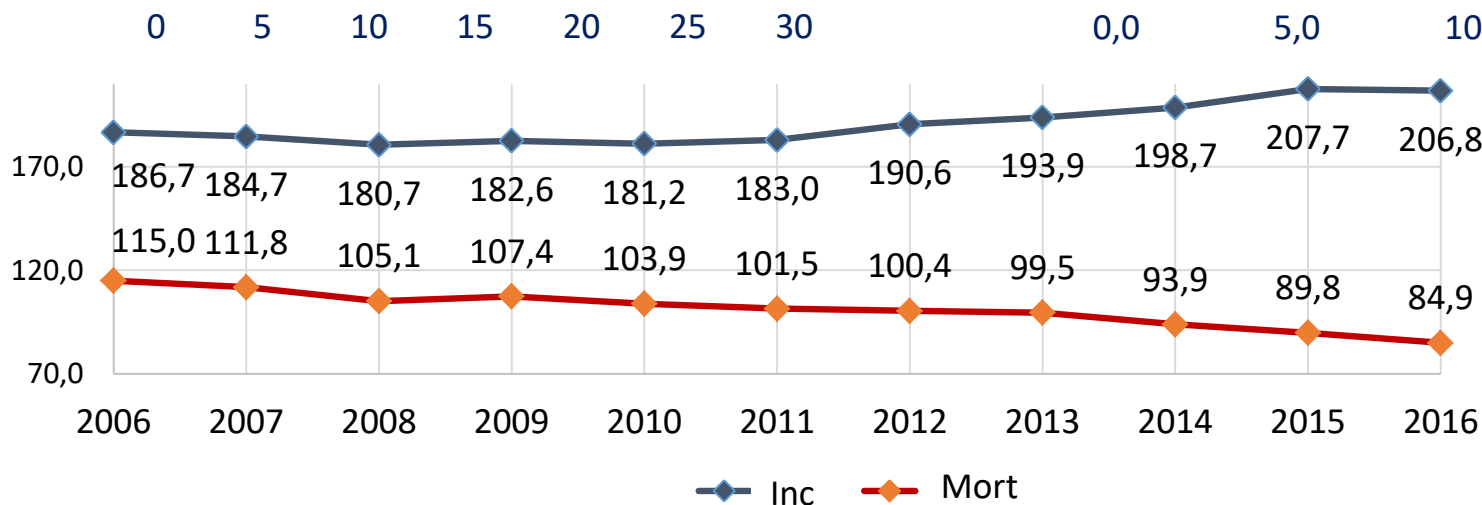
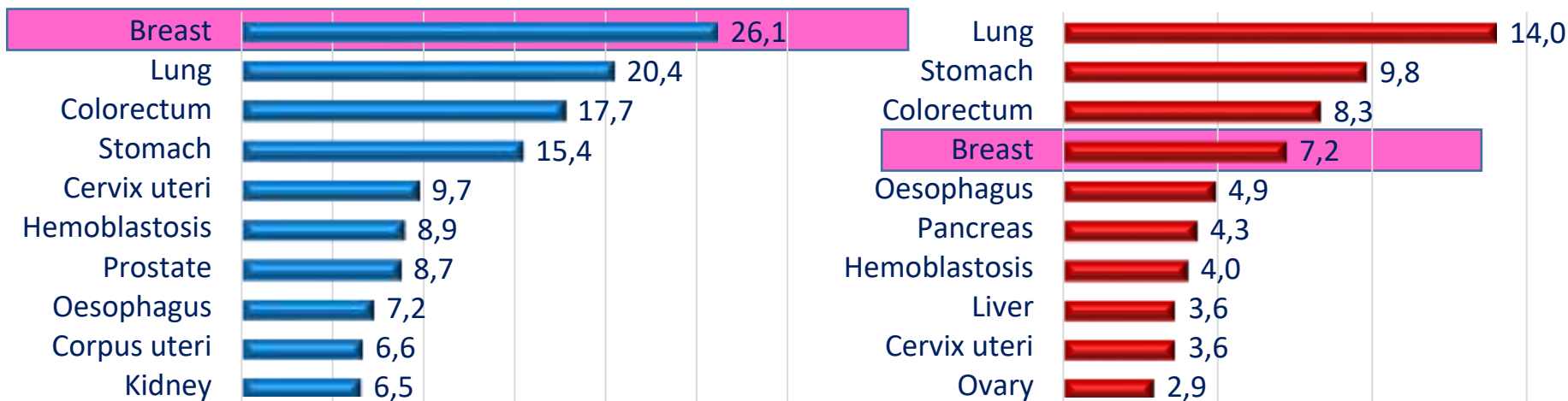


Breast Cancer Mortality, worldwide, Globocan, 2012

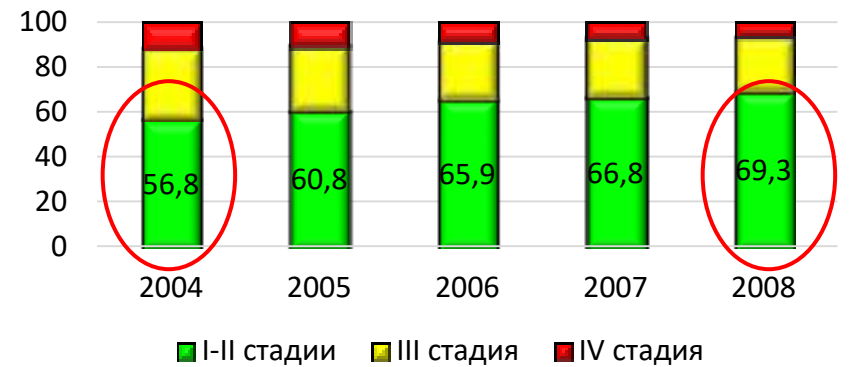
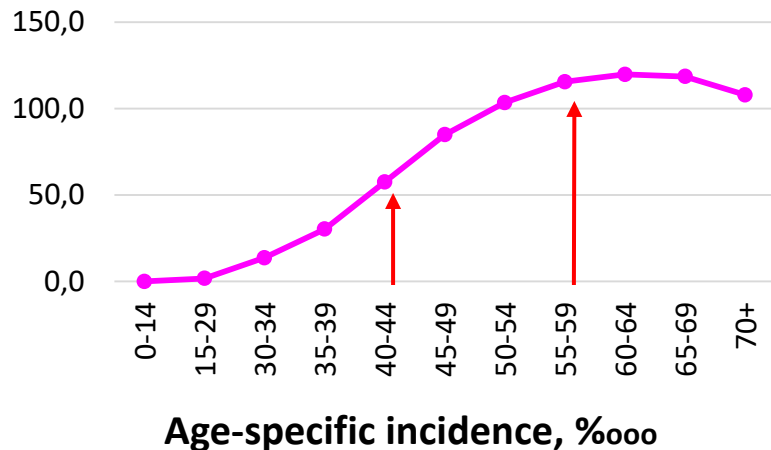
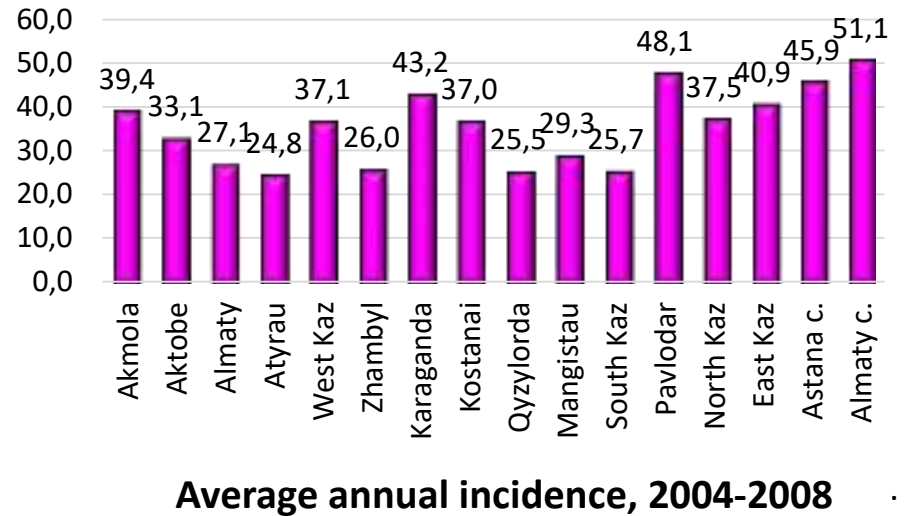
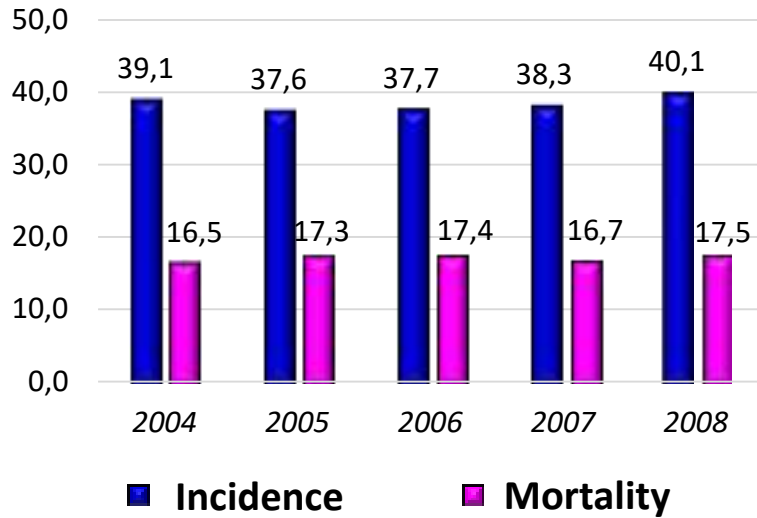
International Agency for Research on Cancer



Breast cancer in the structure of cancer incidence and mortality in Kazakhstan



Breast cancer epidemiology before the start of screening



Breast cancer screening in Kazakhstan

Start among women 50-60 y.o., interval 2 years, mammography



2008

Double reading, archiving of mammograms



2011

Interpretation by BIRADS classification



2011

National guideline for breast cancer screening



2012

Start of digitalization of mammography equipment



2013-2014



2016

Expanding age to 40-70 years old, interval 2 years



2018

Finish of digitalization of mammography equipment with clinical centralization



2018+

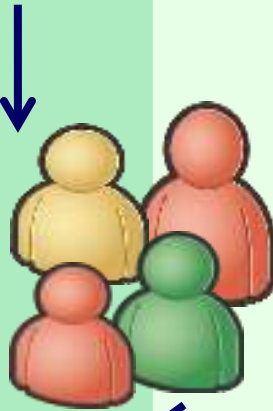


Algorithm for breast cancer screening in Kazakhstan

Target group: women 40-70 years,
interval 2 years

PHC: GP and Development of
Healthy Lifestyle and Prevention

- Plan for a year
- Listing
- Informing
- Invitation
- Filling of medical documentation



Mammography

First reading of mammograms

Cancer Center, Dispensary

Second reading, BIRADS

BIRADS 1, 2

BIRADS 3

BIRADS 4, 5

Mammography
is scheduled in
2 years

Dynamic
mammography
after 6 months

in-depth diagnostics:
sighting mammography,
ultrasound, biopsy

Benign
tumor

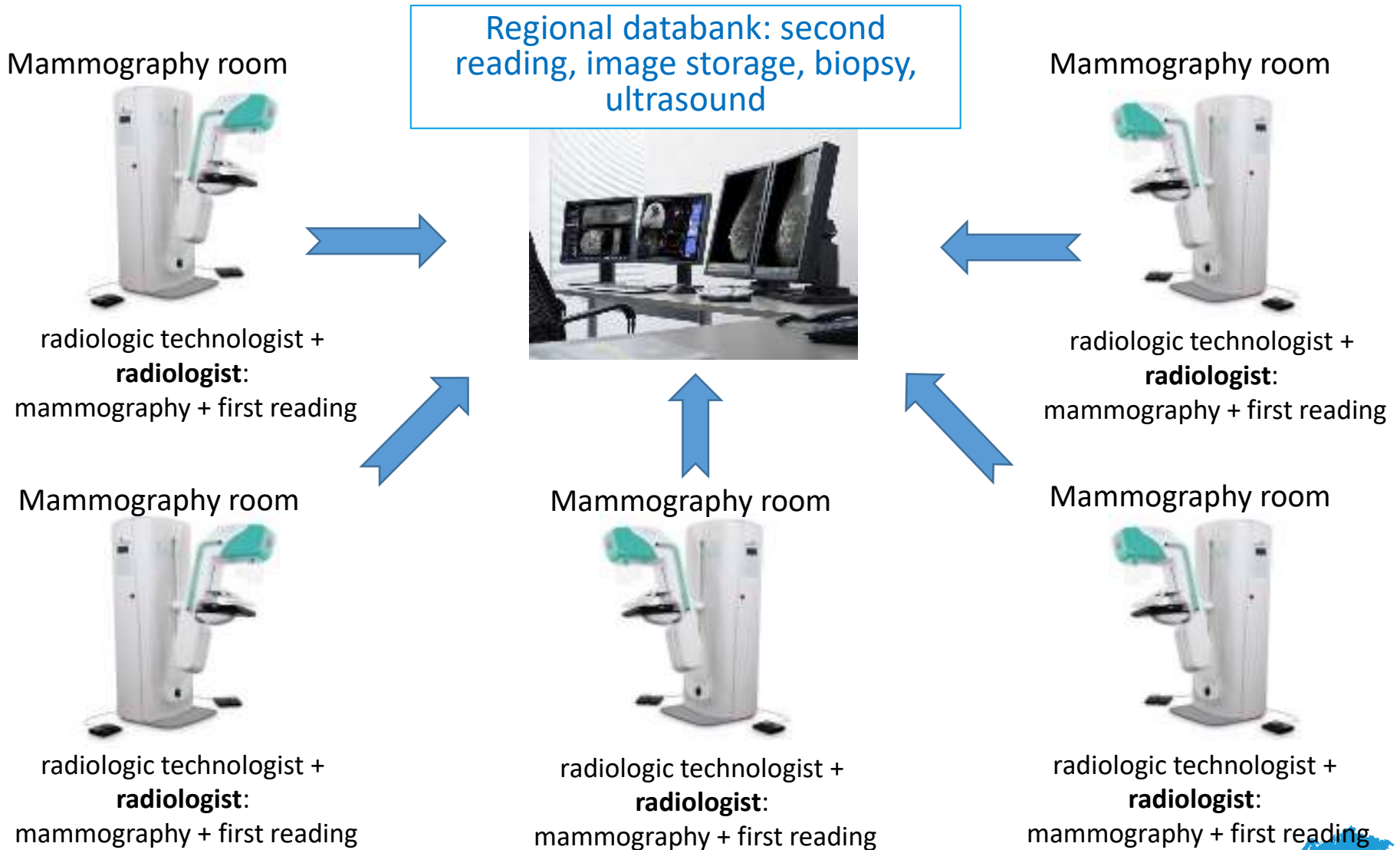
Cancer

Mammologist/oncologist,
screening is scheduled in
2 years

Treatment in
cancer center



Clinical and technical decentralization



Documentation for breast cancer screening

1. Название мед. орг., город, область, район _____

2. Дата прохождения МГ _____

3. Дата поступления МГ в СКДО _____

4. ФИО _____

5. ИНН _____ 6. Неамб. карты _____

7. Год рождения _____

8. адрес _____

9. контактный телефон _____

10. Маммография впервые? ДА/НЕТ _____

11. По скринингу впервые? ДА/НЕТ _____

Если не впервые _____

(дата, место прохождения, который раз)

12. Др. маммографические обследования ДА/НЕТ _____

если ДА когда, где _____

13. Наличие предыдущ. маммограмм ДА/НЕТ _____

14. Менопауза ДА/НЕТ _____ (сколько лет)

15. Наследственность отягощена? ДА/НЕТ _____

рак молочной железы _____ (у кого?)

др. локализации _____ (указать какая, у кого)

16. Гормонотерапевтическая терапия ДА/НЕТ _____

17. Жалобы ДА/НЕТ _____ (указать какие)

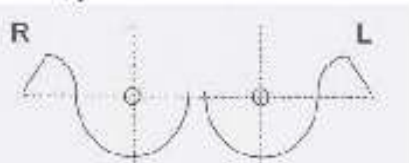
18. Анамнез _____ год

	правая	левая
18.1 Аспирация кисты		
18.2 Секторальная резекция (доброкачественные образования)		
18.3 Мастэктомия		
18.4 органосохранная операция		
18.5 Лучевая терапия		
18.6 Другие операции		

19. Видимые изменения железы _____ год

	правая	левая
19.1 На коже - рубец, родинка, папиллома, др.		
19.2 Изменение соска		
19.3 Выделения из соска		
19.4 Деформация / уплотнение		

19.5 Видимые изменения (зарисовать на рис., подчеркнуть в таблице)

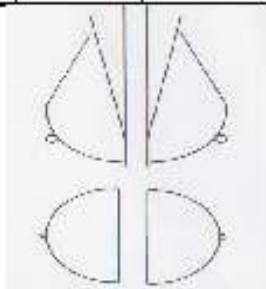


20. Проекция маммограмм и их число

Проекция	R	L
Прямая (CC)		
Косая (obl)		
общее число маммограмм		

21. Число повторных маммограмм

R	L	Рентгенлаборант ФИО _____ Подпись _____



22. 1-я читка маммограмм в полноразмере

R	L	Дата _____ Врач, ФИО _____

23. СКДО _____

24. Рентген. плотность железы (от I до IV) R _____ L _____

25. Качество МГ _____

26. «Двойная» читка

26.1. «Вторая читка»



рентгенолог	дата	R/L
первый		
второй		
общее заключение		

Врач 1, ФИО, подпись: _____

Врач 2, ФИО, подпись: _____

26.2. При разном результате интерпретации маммограмм двумя рентгенологами («третья читка») Дата _____

рентгенолог	1-й раз R/L	заключение R/L
первый		
второй		
Ответственный рентген.		
Заключение (общее) и рекомендации	рекомен.	заключение

Ответст. врач _____

27. МАММОГРАФИЯ _____

(название медучреждения) _____

(СКДО) _____

ФИО _____

год рождения _____

Дата маммографии: _____

« _____ » _____ 20 _____ г.

Дата «второй читки» или «третьей читки» _____

(нужное подчеркнуть) _____

« _____ » _____ 20 _____ г.

Заключение (BI-RADS):

R	L

Врач(и), ФИО, подпись(-и): _____

28. Рекомендации:

28.1. Пригласить на скрининг через 2 года

28.2. Пригласить на доп. обследование в СКДО (МГ, УЗИ, биопсия)

28.3. Краткосрочный динамич. контроль

через _____

28.4. Переснять маммограммы (технические, неполный охват)

Quality Standards

№	Indicator	Standard	
		Minimum	Target (desired)
1	The proportion of women screened to the number of women to be screened	> 80%	> 80%
2	The proportion of women screened to the number of women invited	> 95%	100%
3	The share of women screened for a second time and more after a set interval of 2 years	> 90%	100%
4	The share of women with mammograms of acceptable quality	> 93%	> 97%
5	The share of women invited for further clarifying diagnostics to Specialized consultative and diagnostic department	≤ 10-12%	< 5-7%
6	Time in working days (wd) between: Screening mammography and reading result		
	≤ 30 <i>wd</i>	> 95%	> 95%
	≤ 15 <i>wd</i>	> 90%	> 90%

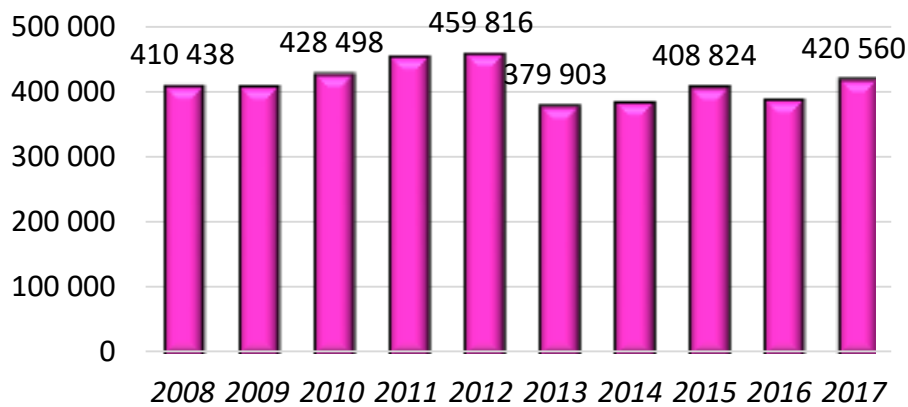


Characteristics of breast cancer screening in Kazakhstan

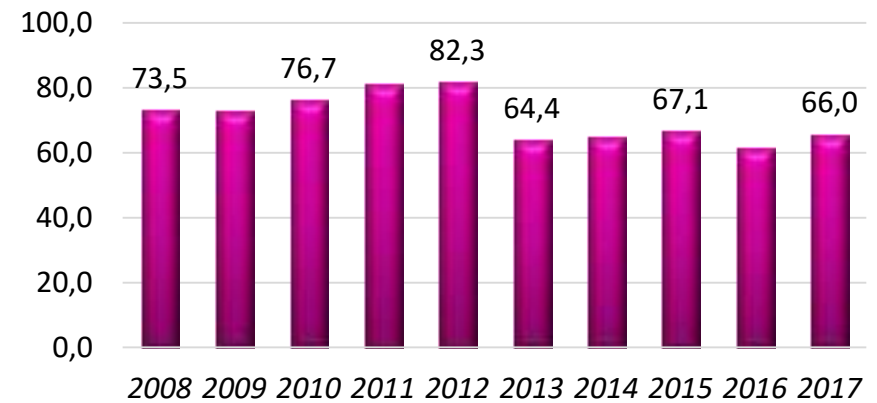
- Special forms of medical documentation
- Software "Automated information system" Polyclinic".
Formation of unified screening database.
- Monitoring: comparison of the results of screening with the data of cancer centers (the second reading), the Cancer Registry, the Register of Dispensary Patients
- Equipment: 235 stationary mammography rooms, 26 mobile mammographs, 18 mammography departments (rooms) in oncological centers/dispensaries
- Financing: screening mammography - local budget, stage of in-depth diagnosis - the republican budget (KZT200 million or USD 610 thousand)



Participatory indicators (coverage by screening)

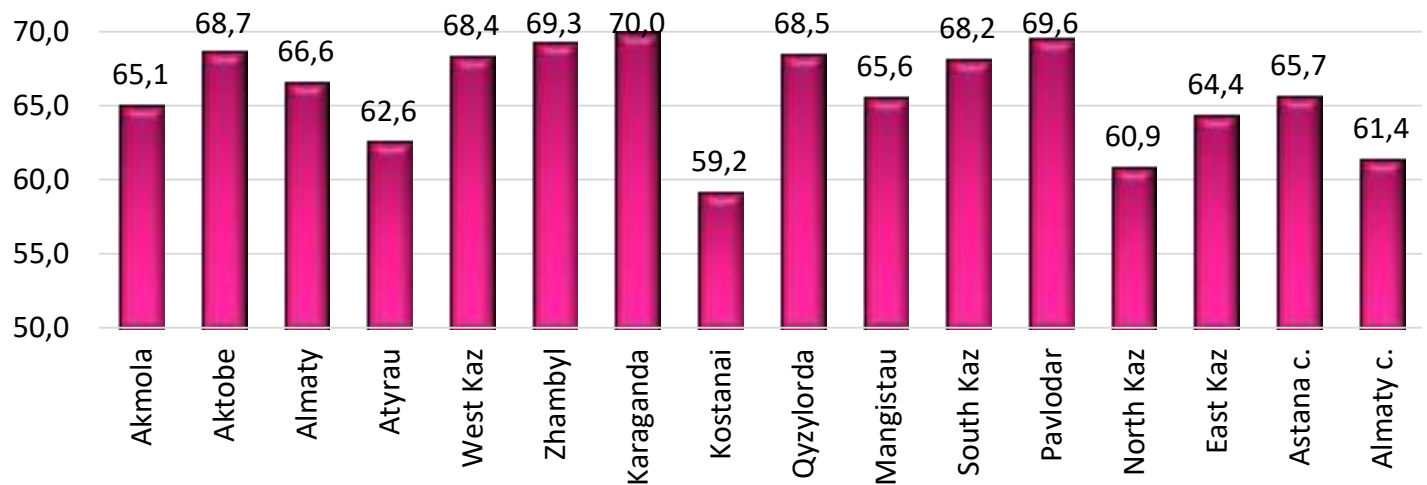


Coverage, number of women

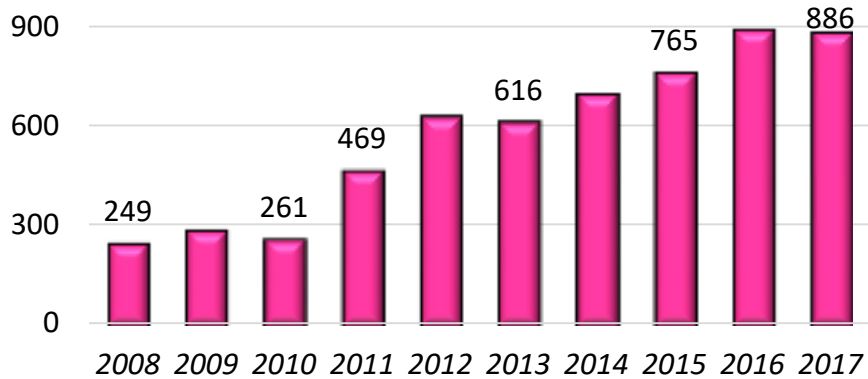


Coverage by the Population Registry, %

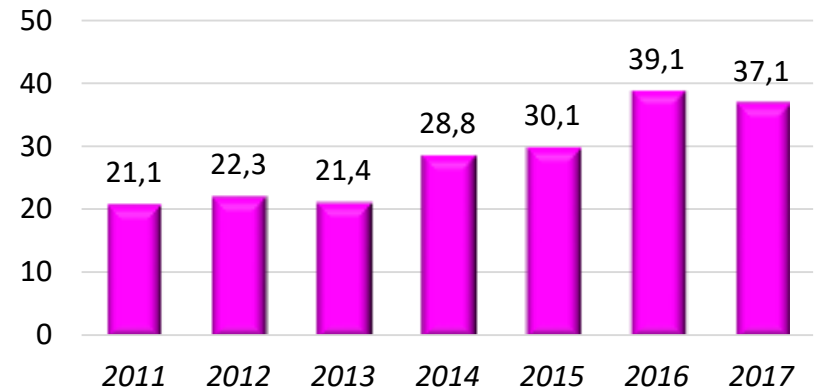
Coverage by the Population Registry, % and by regions, 2017



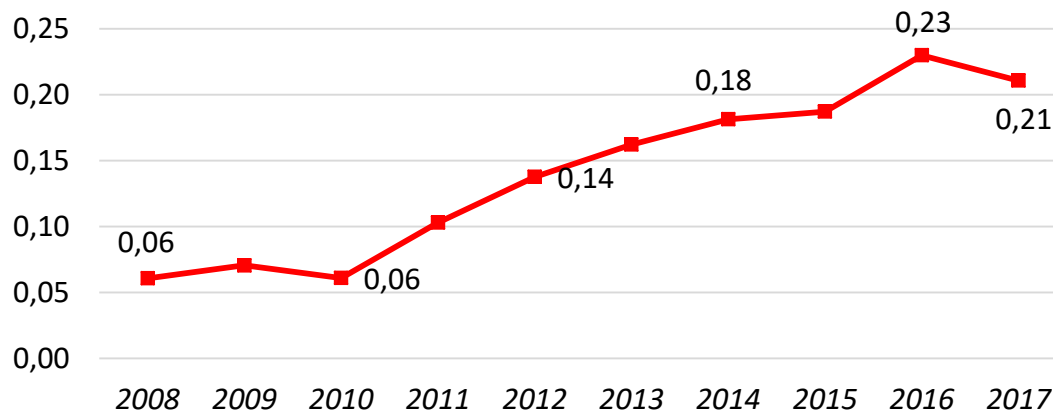
Screening results. Cancer detection



Number of breast cancer cases, detected by screening



Stage I of breast cancer, specific weight, %

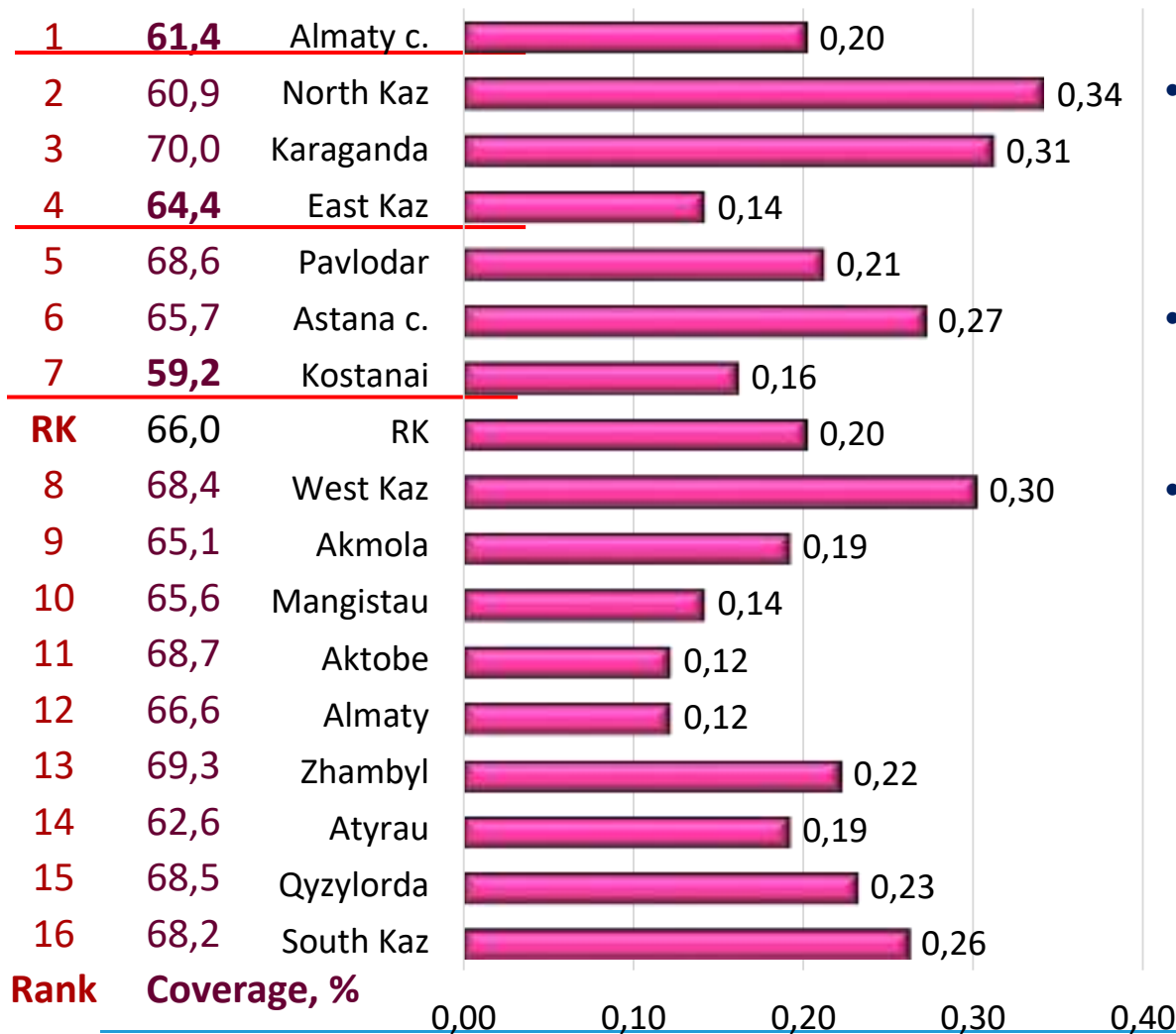


Breast cancer detection rate, %



Breast cancer detection rate, 2017

Ranking of regions according to the basic incidence (2016)

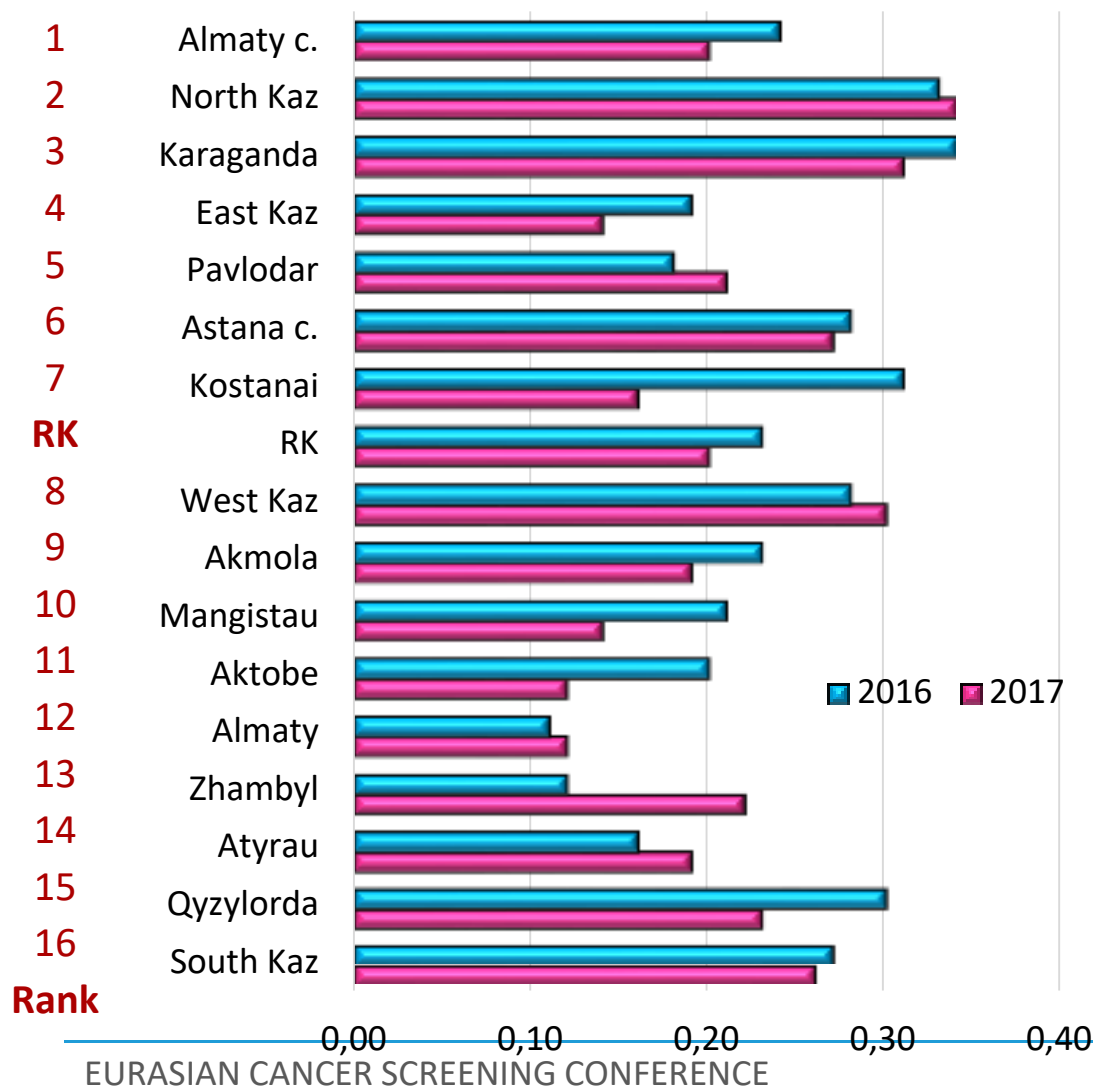


- The dependence between the detectable level and basic incidence of breast cancer is low.
- Cancer detection rate depends on the screening coverage
- The difference between cancer detection rate varies from 0.12% in Aktobe and Almaty oblasts to 0.34% in the North Kazakhstan oblast.



Dynamics of breast cancer detection rate

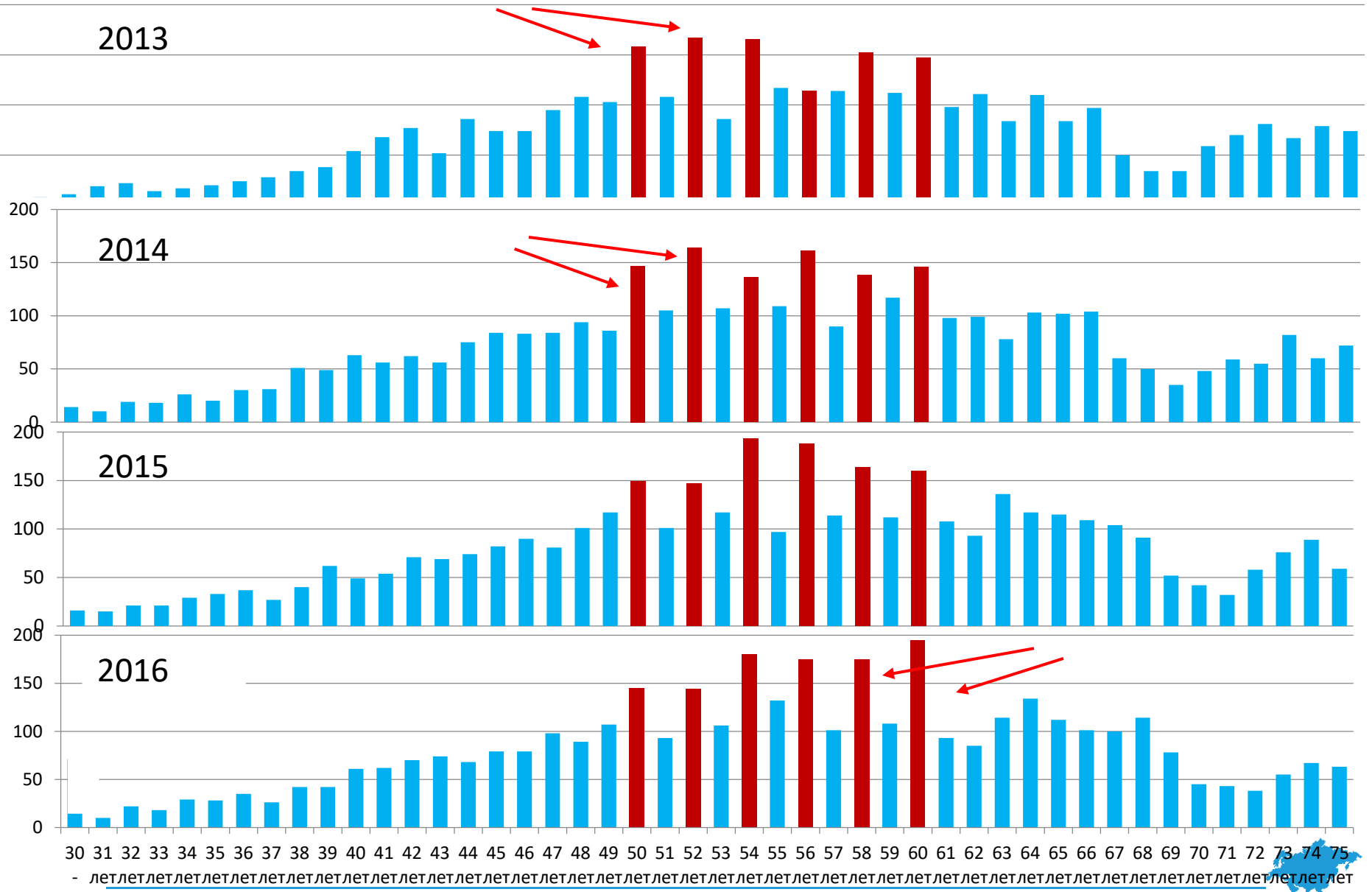
Ranking of regions according to the basic incidence (2016)



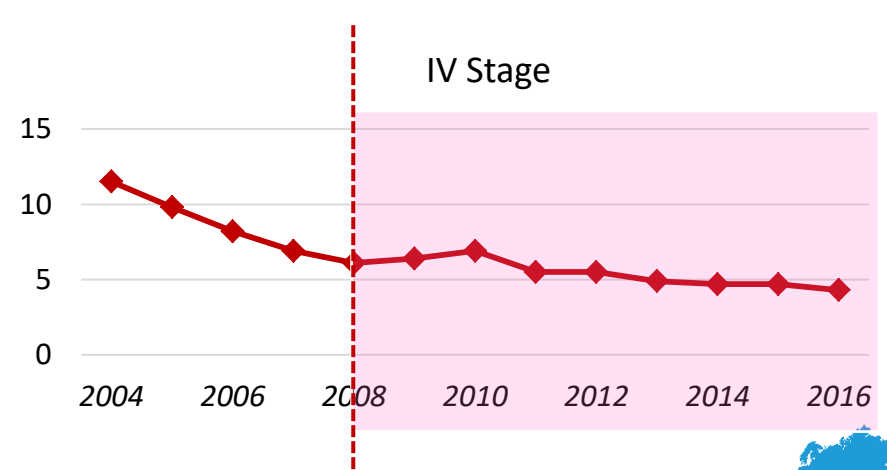
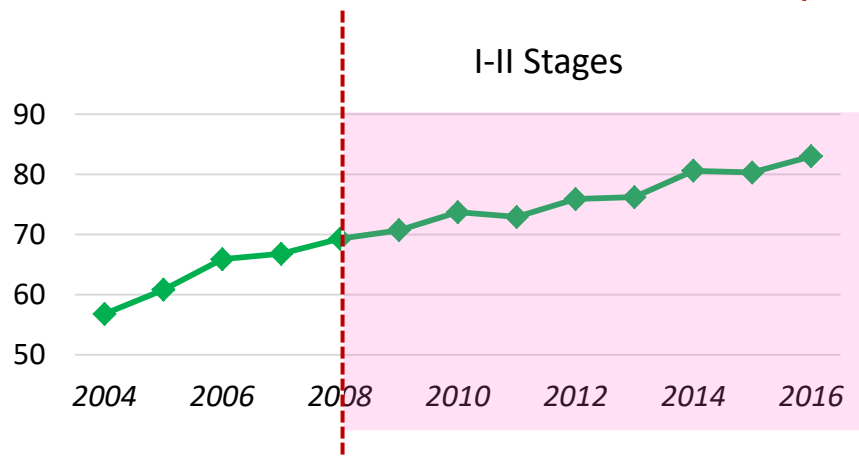
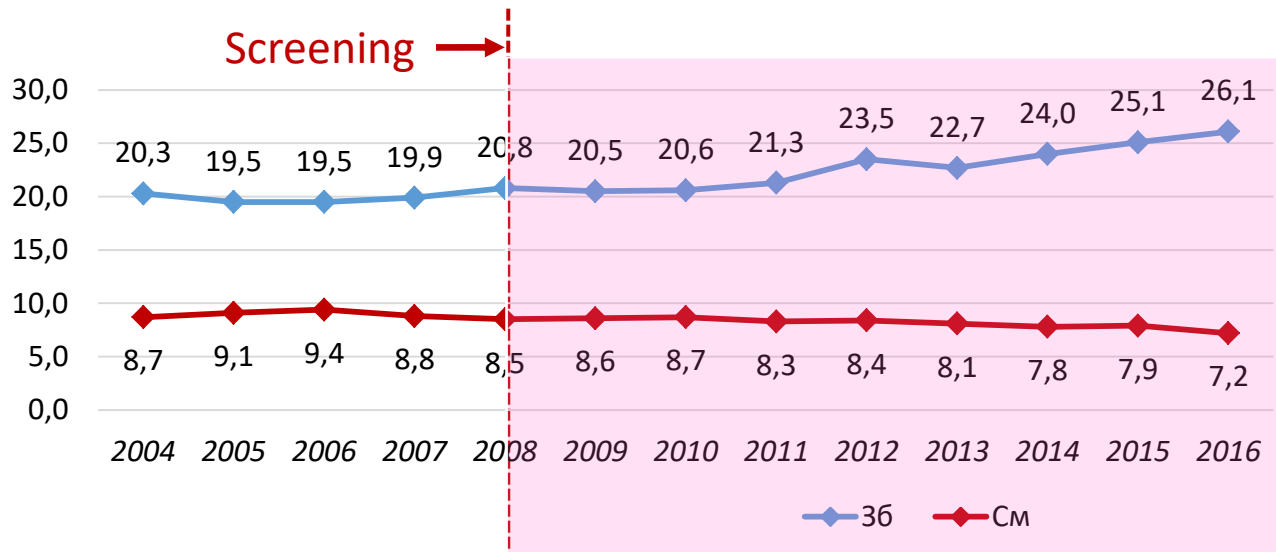
- In many regions, the detectable level is stable
- In dynamics, there is a trend of higher cancer detection rates in regions with a high basic incidence of breast cancer



Age-specific BC incidence for 2013-2016, number of patients



Dynamics of breast cancer incidence and mortality in Kazakhstan



Breast cancer screening problems in Kazakhstan

- Obsolescence of mammography equipment
- Digitalization of mammography equipment is not completed
- Incomplete staffing of radiologists, X-ray technicians, archivists of mammography archive
- Low quality of screening software, insufficient integration with other registries (dispensary patients, registry-register), high paper workload
- High incidence of breast cancer in other age groups



Evaluation of the BC screening in Kazakhstan

- WHO (Dr Tit Albreht) and ImPACT missions (2016)
- A positive assessment of the breast cancer screening implementation in Kazakhstan; there was identified the potential for its improvement
- Recommendations were made (Finish digitization of the equipment. Extend the age of inclusion up to 69 years. Increase in coverage rate. Ensure continuous evaluation of over-diagnosis, false positive and false negative rates as well as quality indicators listed in the EU guidelines. Monitor the 5-year and 10-year survival)



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Prospects for the development of breast cancer screening in the Republic of Kazakhstan

- Increasing of coverage rate till 70% and more
- Monitoring and analysis of quality standards at all stages of screening
- Use of software that eliminates duplication and a large amount of paper documentation
- Transition to the model of clinical centralization
- Continuous training of all screening participants
- Epidemiological evaluation of the results. External quality control. The international collaboration





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Thank you for your attention!

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