

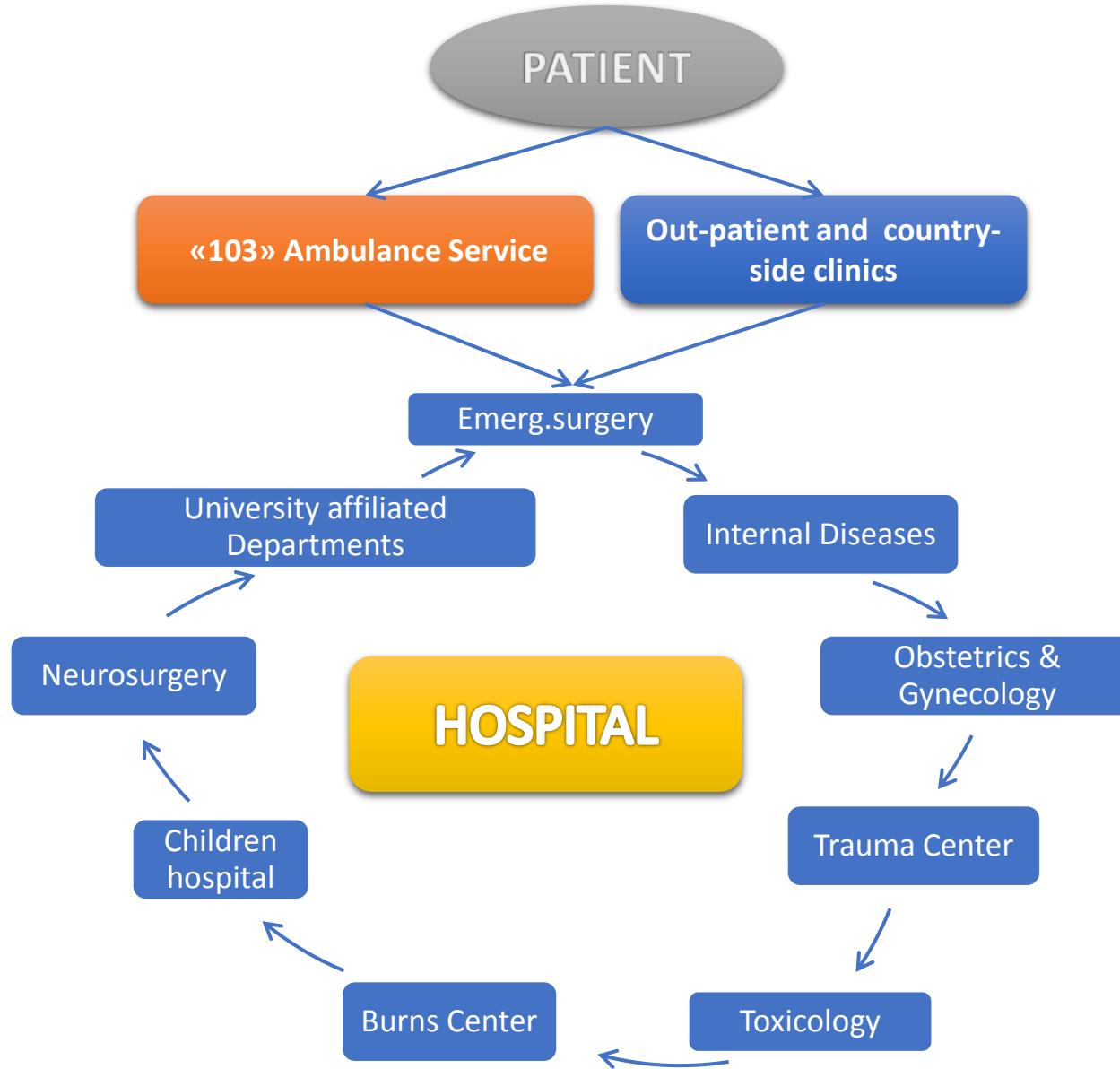
# EMS in Uzbekistan: Achievements and prospective

Khikmat ANVAROV, *MD,MS*  
**Deputy director, RRCEM**

April 20, 2018  
Antalya, Turkey



# OLD SYSTEM OF EMERGENCY CARE, USED DURING SOVIET UNION



# ACHIEVEMENTS OF HEALTH PROCESSING OF THE REPUBLIC OF UZBEKISTAN

1. Reforming the primary healthcare system to the population, and first of all, rural areas.
2. **Establishment of an effective system of state-guaranteed emergency care.**
3. Improving the protection of health of mothers and children.
4. Ensuring sanitary and epidemiological stability in the country.
5. Establishment of high-tech specialized medical centers in the country that meets world standards.
6. Improvement of healthcare financing system.



# **Formation and stages of development of the EMS in Uzbekistan**

**1998**

**Presidential Decree No. PF-2107**

**"On the State Program of Reforming the Healthcare System of the Republic of  
Uzbekistan"**

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**2003**

**Resolution 537 of the Cabinet of Ministers**

**About measures on further enhancement of emergency medical service to the  
population**

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**2009**

**Decree of the President of the Republic of Uzbekistan PP-1114**

**"About perfection of activities of the emergency care system"**

---

**2017**

**Decree of the President of the Republic of Uzbekistan No. UP-4985**

**"On Measures for Further Improvement of Emergency Care"**

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**2017**

**Decree of the President of the Republic of Uzbekistan PP-2838**

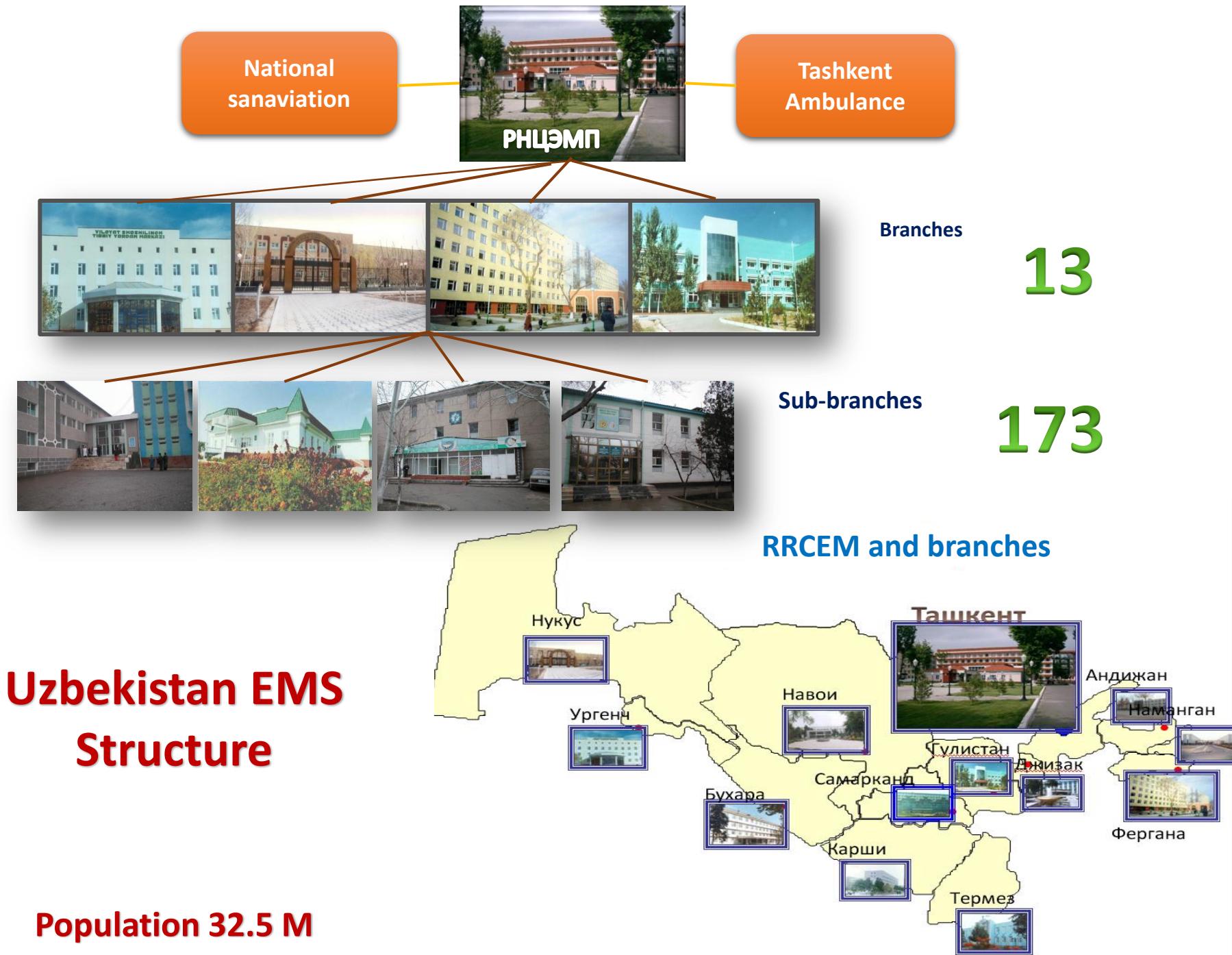
**About measures for further enhancement of activity and strengthening of  
material-technical base of emergency care service**

---

**2018**

**Decree of the President of the Republic of Uzbekistan PQ-3494**

**About measures for further accelerated development of emergency care service in  
2018-2020**



# Basic principles of EMS

- a) openness to the whole population
- b) efficiency
- c) based on modern standards
- d) step-by-step



# ORGANIZATION OF EMERGENCY CARE IN DISASTERS:

## Mobile teams and Emergency aid points:

1. In the structure of RRCEM and its Regional Branches there are 39 specialized quick-preparedness medical teams.
2. In the structure of Sub-branches there are 173 mobile emergency teams

## Hospitals of Emergency Medicine System:

1. RRCEM and its 13 Regional Branches – providing of specialized emergency medical aid
2. 173 district sub-branches of RRCEM – qualified medical aid

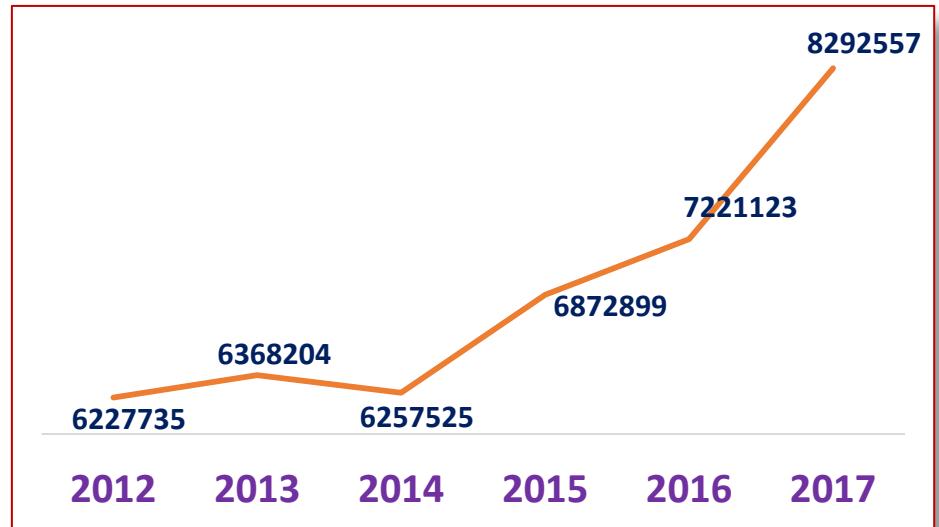
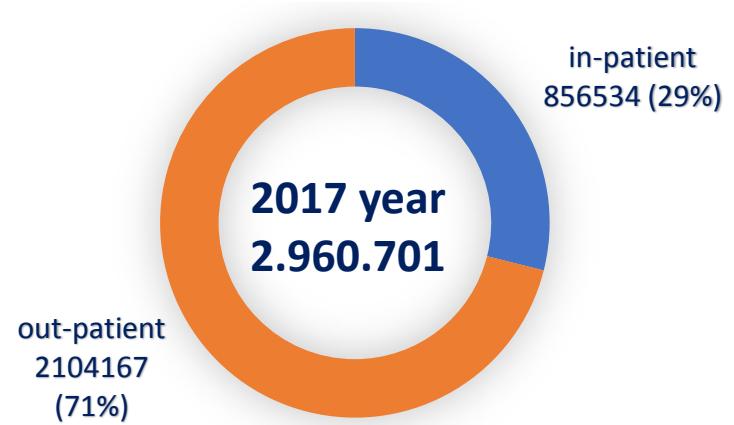
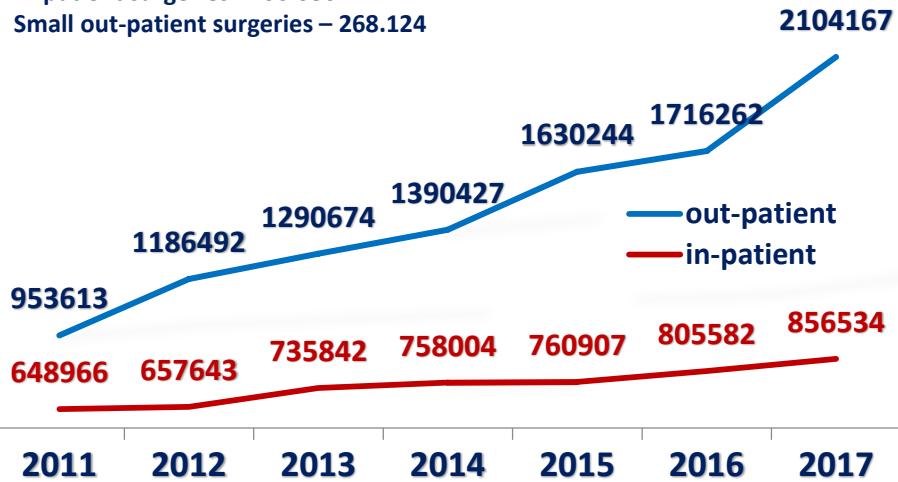


The experience shows, that whereas EMT is developed, the activity of medical aid in disaster is also successful.

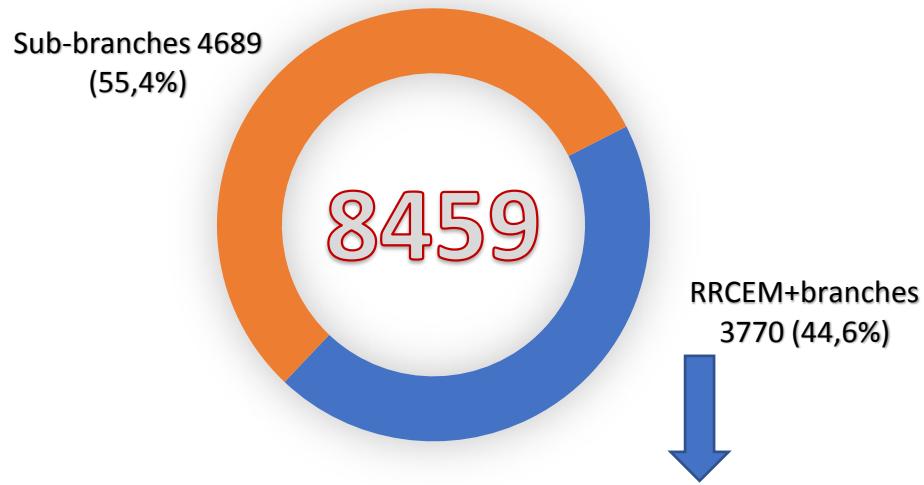
# Annual activity of EMS

## (2017 – 11.25 millions admissions)

In-patient surgeries – 206.086  
Small out-patient surgeries – 268.124



# Beds structure in RRCEM

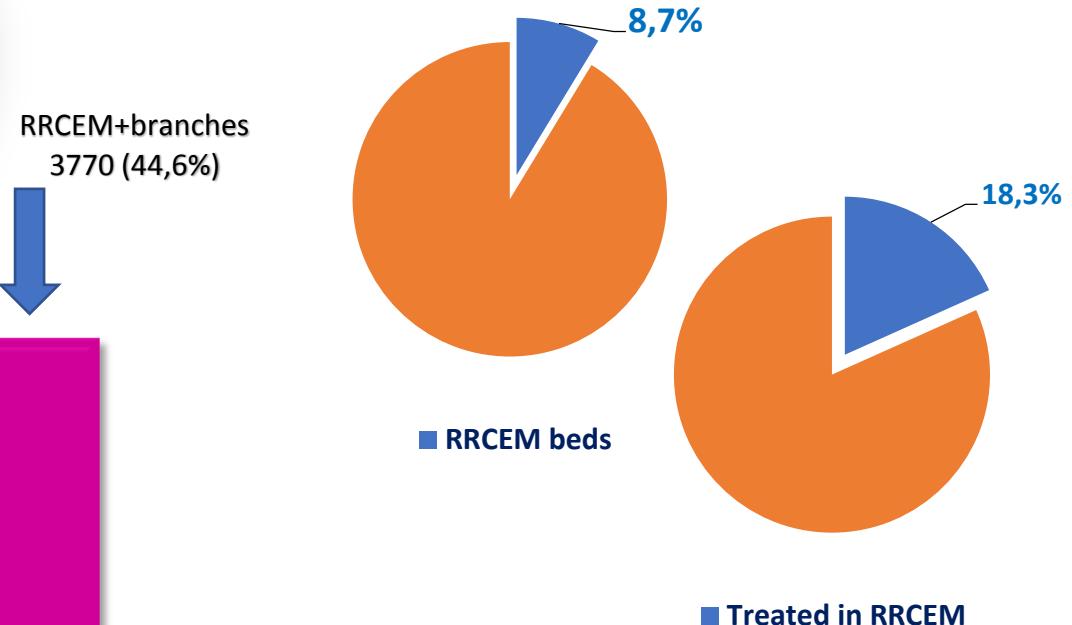


## A. Surgery and ICU profile

1. ICU
2. Abdominal and thoracic surgery
3. Angio- and microsurgery
4. Trauma and neurosurgery
5. Urology
6. Gynecology
7. Combustiology
8. Toxicology

## B. Medical profile

9. Urgent therapy
10. Cardiology
11. Neurology



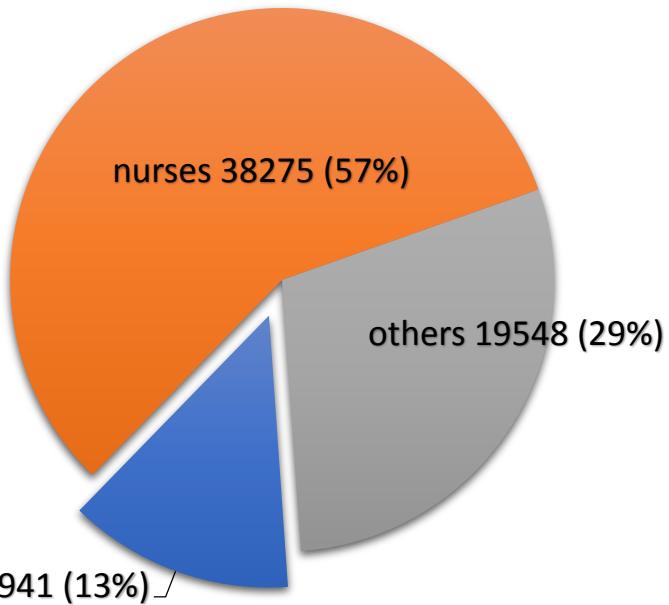
## C. Pediatric profile

12. Children surgery
13. Pediatrics
14. Children trauma and neurosurgery

# EMS staff (2016)

Total employees – 66764

Doctor/nurse ratio = 1/4.3



Жиззах



Самарқанд



Андижон

DSc 27

PhD 71

## HIGH-TECH EQUIPMENT

**USD 7,000,000**

**Japanese Grant (RRCEM)**

**USD 8,000,000**

**Spanish Credit line (RRCEM)**

**USD 23,000,000**

**Islamic Development Bank Credit line (12 Regional Branches)**

**USD 22,000,000**

**Kuwait Fund for Arabian Economic Development (172 subbranches)  
A new project for RRCEM's re-equipment for 2018-2021**

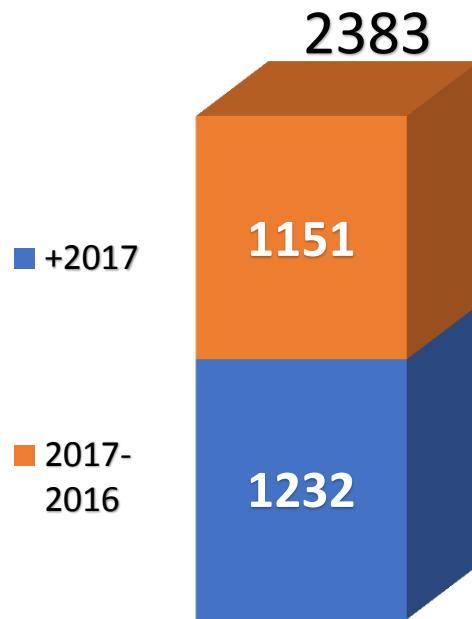
**USD 100,000,00**



## Dynamics in some pathologies

Pathology	Patients		Mortality rate		
	1998	2015	1998	2015	Decreasing
Strangulated hernia	5936	20299	1,0	0,3	67%
GI-bleedings	849	1336	7,4	3,3	55%
Appendicitis	62390	102331	0,06	0,02	67%
Cholecystitis	2723	9420	1,7	0,5	71%
Myocardial infarction	7806	11211	13,9	11,1	20%

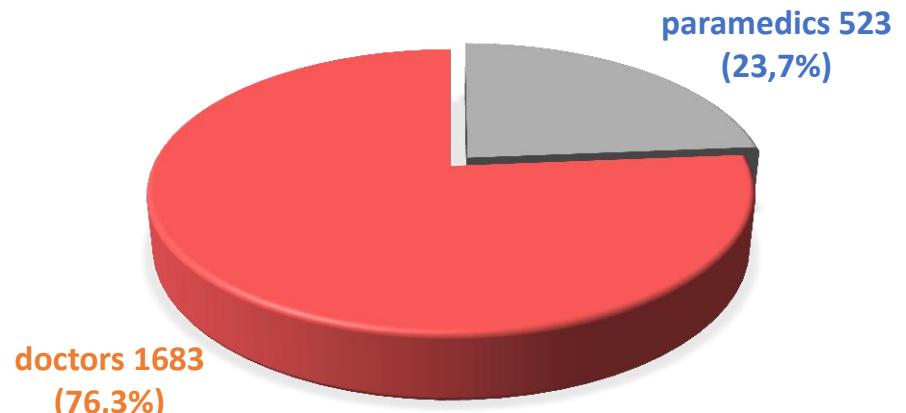
## AMBULANCE STAFF AND VEHICLE



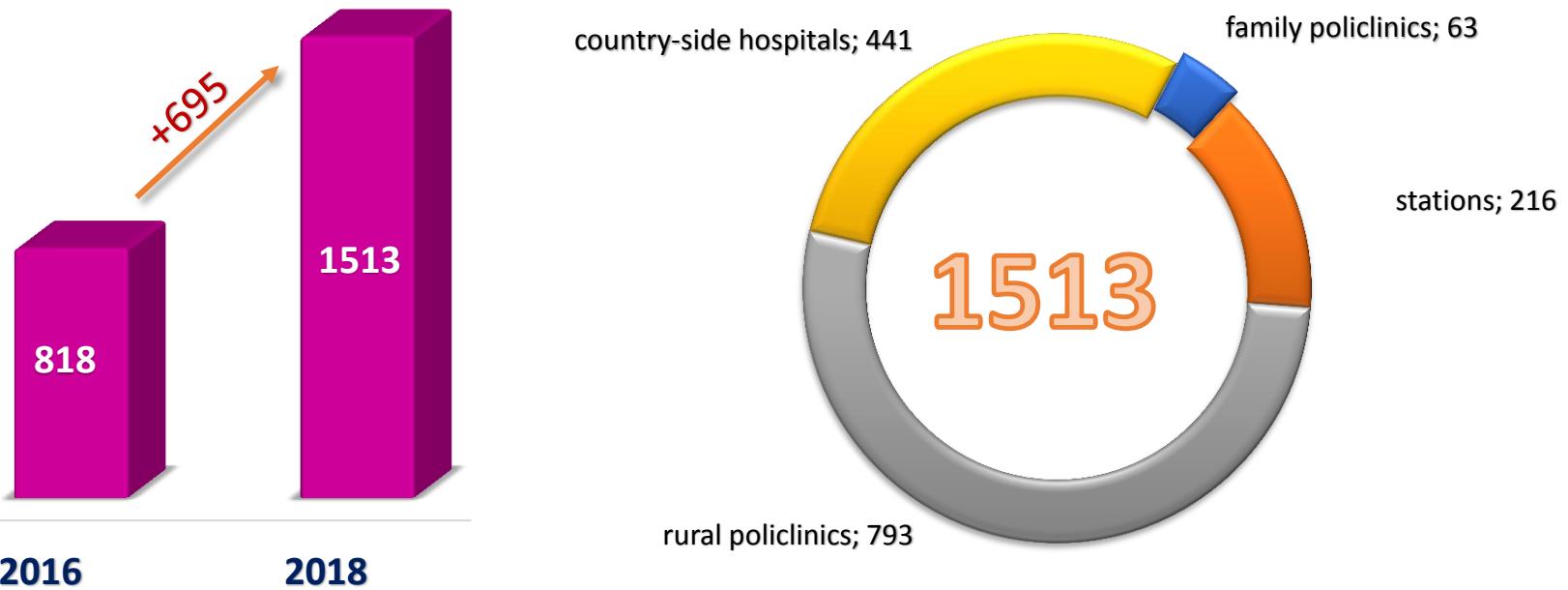
Ambulance vehicle number, 2017



2206 ambulance teams

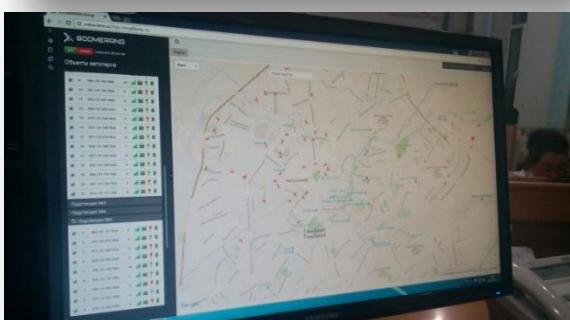


# AMBULANCE TEAMS' LOCALIZATION



## CALL CENTERS

### Tashkent and regions



# Call-center's tasks

Response and adequate dispatching by single phone No 103

Triage and consulting by phone

Coordination with other hospitals and emergency services

Team management and control

Medical coordination in disaster and catastrophes

# Activity and scheme in disasters



Medical triage

Scene

MEoA troops



evacuation

Special medical teams

Nearest RRCEM branch/ sub-branch



RRCEM and branches

**Principle: «Physician to patient»!**

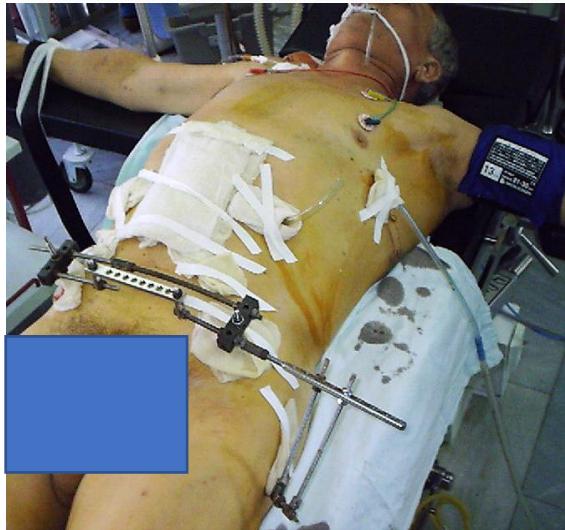
## **«103» Ambulance Service activity: decreasing of late hospitalization rate**

Pathology	2010	2015	Decreasing
<b>Strangulated hernia</b>	<b>9,3</b>	<b>8,0</b>	<b>14%</b>
<b>Acute appendicitis</b>	<b>15,7</b>	<b>11,7</b>	<b>25%</b>
<b>Acute pancreatitis</b>	<b>30,7</b>	<b>25,1</b>	<b>18%</b>

# Management of polytrauma

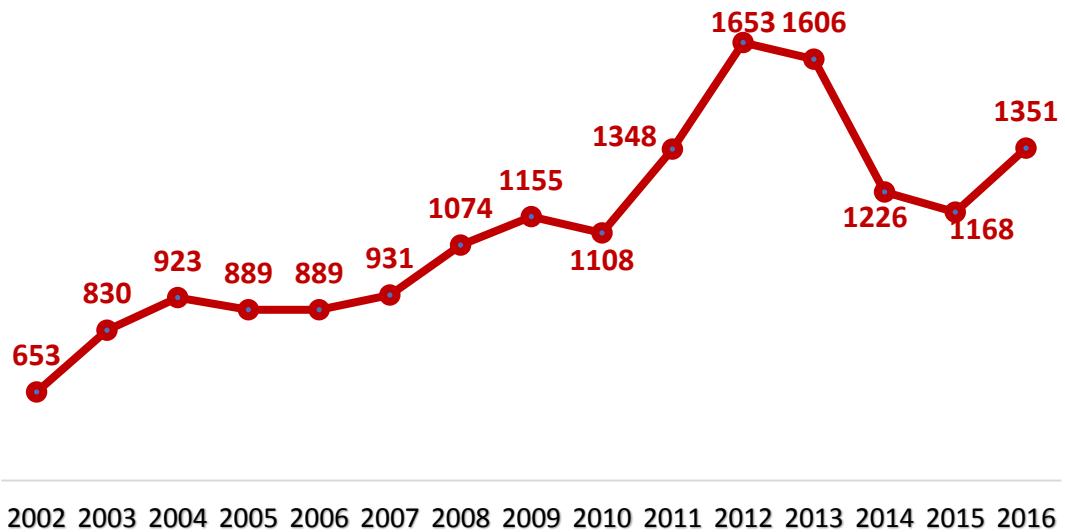
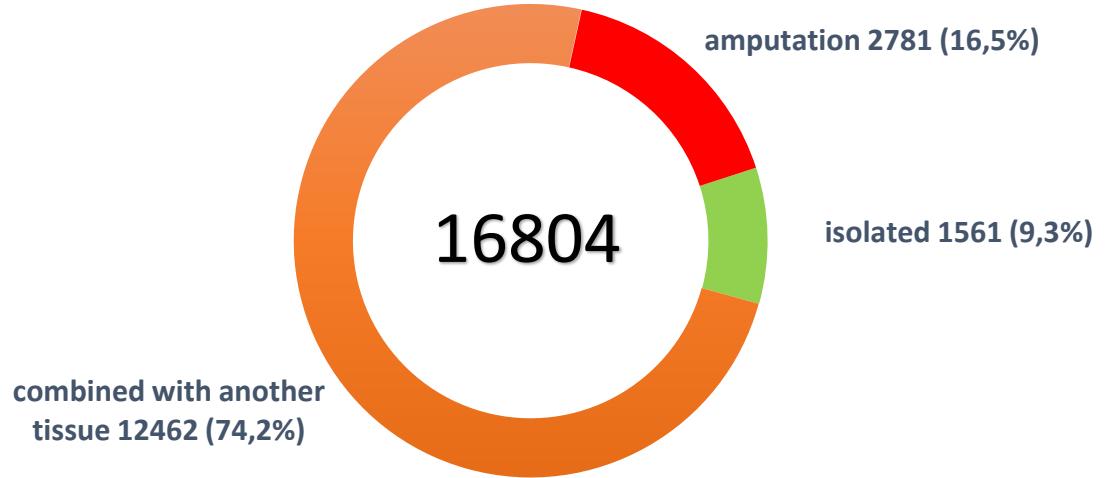


Сон суюгининг остеосинтези ва эрта некрэктомия

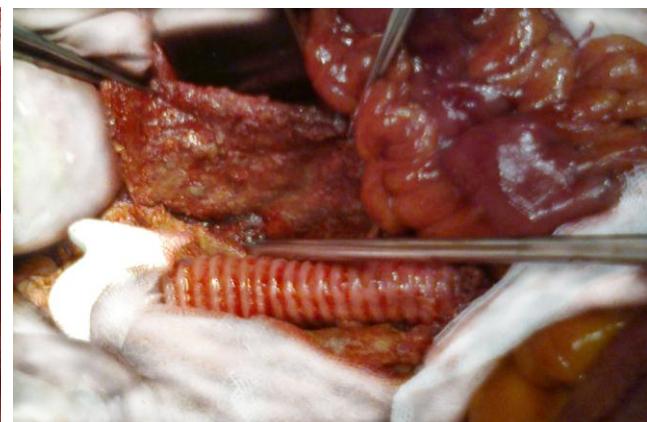
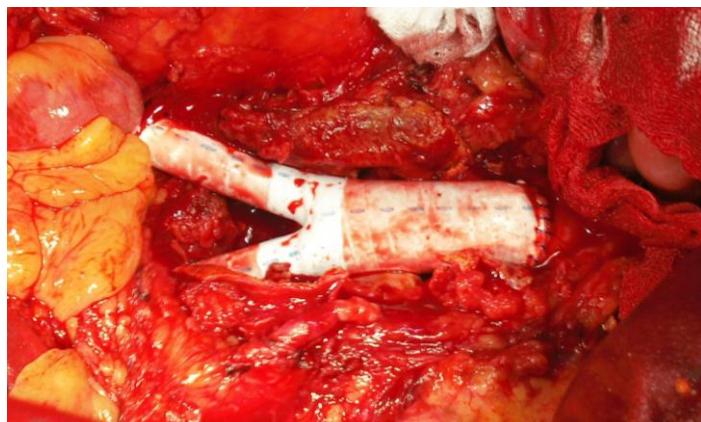
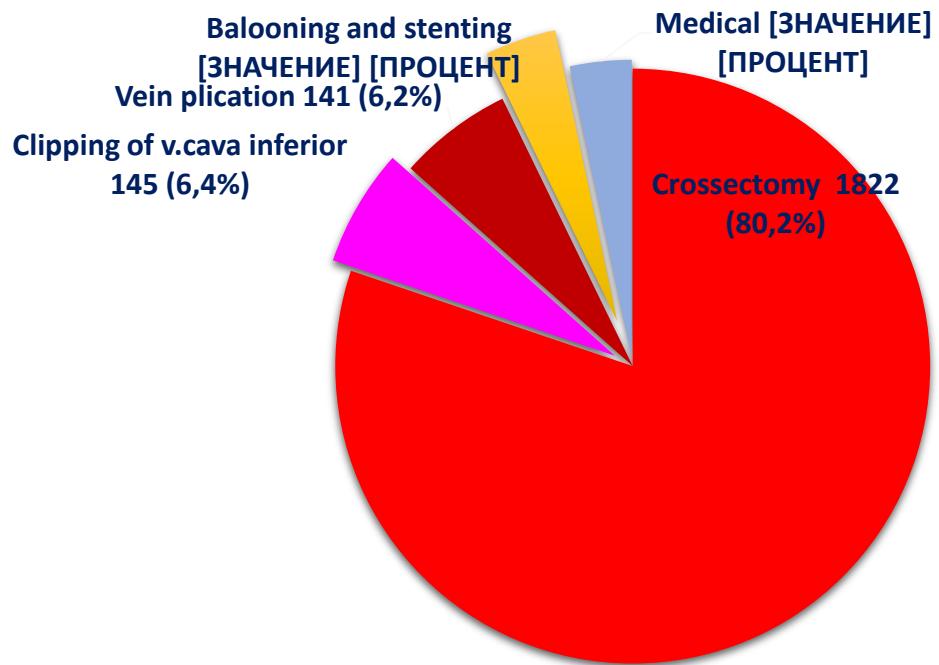


Чап томонлама торакоскопия, лапаротомия, спленэктомия, тос сүяклари остеосинтези

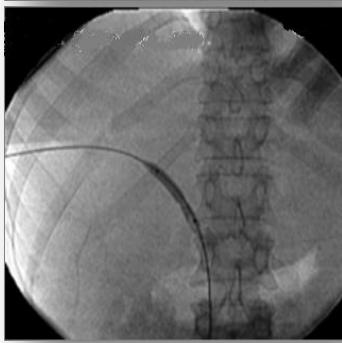
## Trauma of magistral and peripheral vessels (RRCEM+branches, 2016)



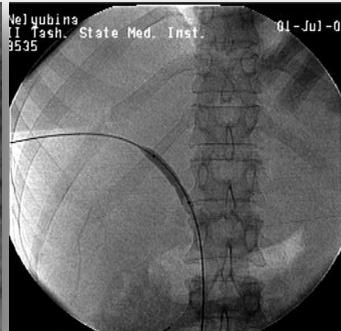
# Acute ischemia of extremities (RRCEM, 2002-2016), n=1305



# Percutaneous draining in mechanical jaundice



CBD ballooning and stenting

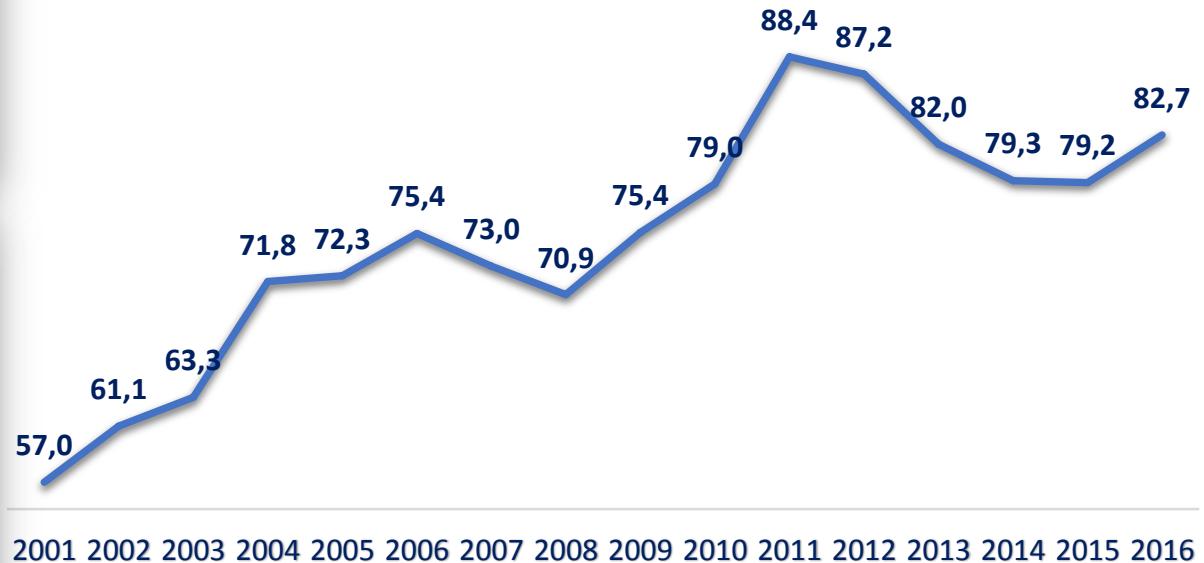


Баллонная дилатация и каркасное дренирование при стриктуре билиодigestивного анастомоза

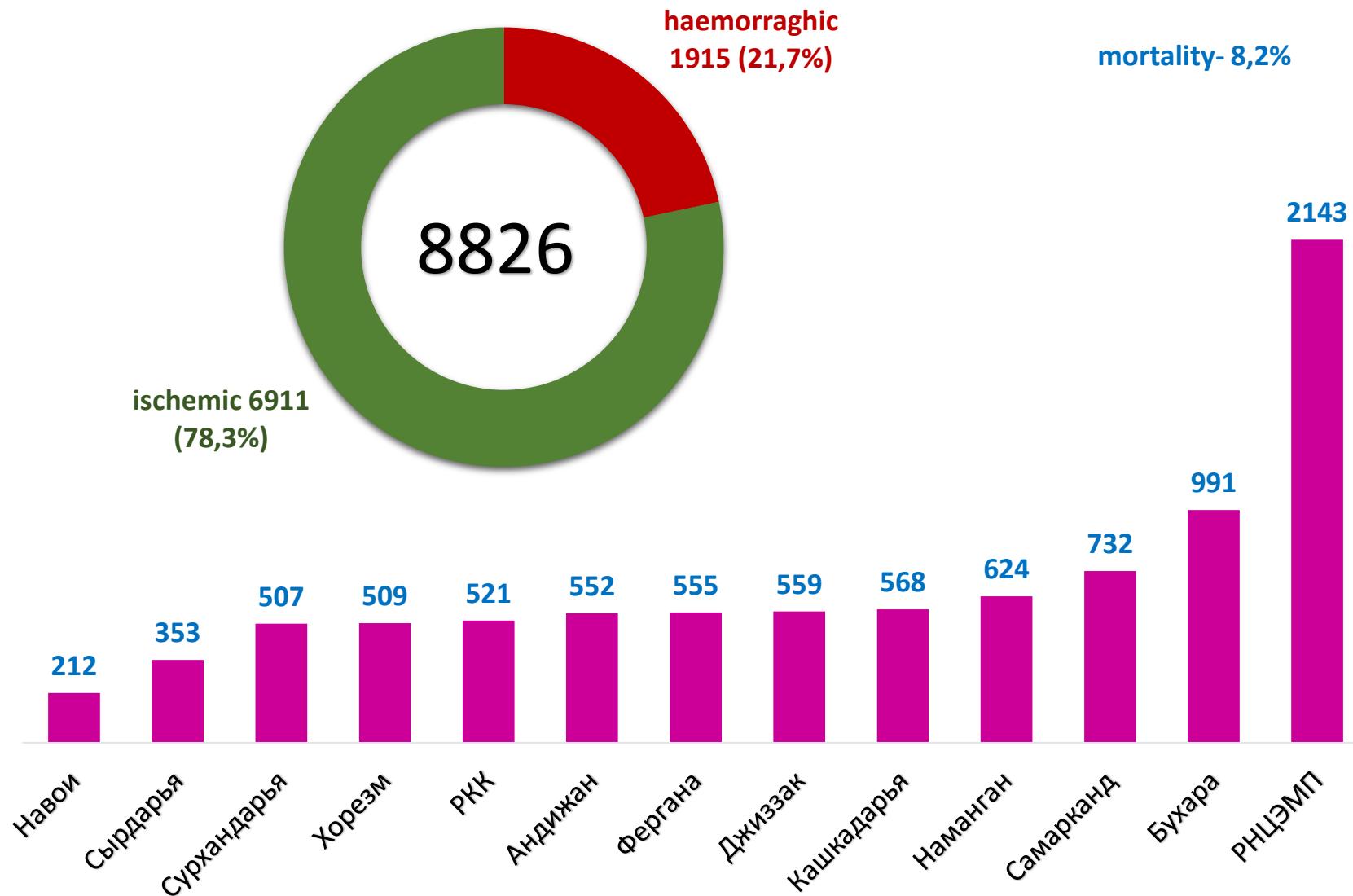
## Характер эндобилиарного вмешательства

	Всего, n=333	
	абс.	%
ЧЧХС (наружное дренирование)	59	17,7
ЧЧХС (наружно-внутреннее дренирование)	274	82,3
ЧЧХС + низведение камня	52	15,6
ЧЧХС + баллонная дилатация	59	17,7
ЧЧХС + баллонная дилатация + низведение камня	131	39,3
ЧЧХС + баллонная дилатация + каркасное дренирование	28	8,4
<b>Всего ЧЧХС + дополнительные вмешательства</b>	<b>270</b>	<b>81,1</b>

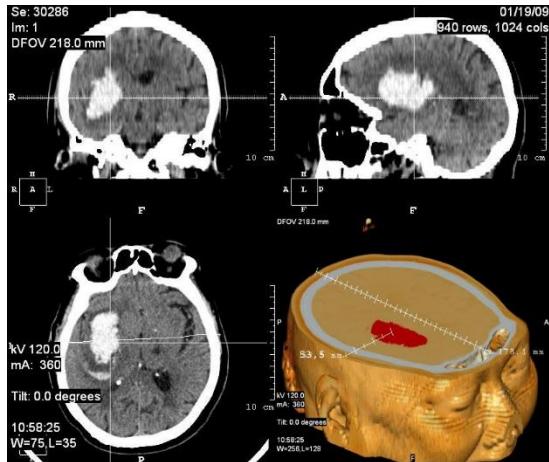
# Dynamics of the number of specialized operations conducted in the RRCEM and its branches, x1000



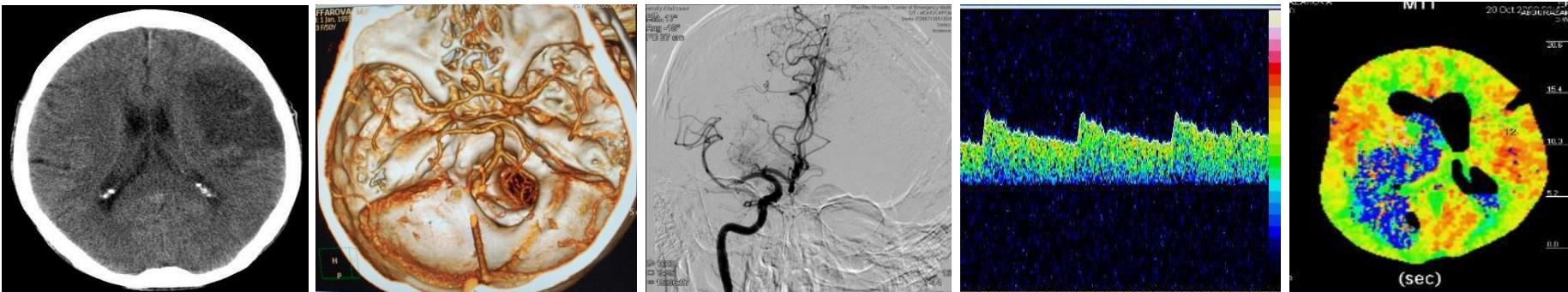
# Strokes in RRCEM and its branches, 2016



# Stroke diagnostics, 2016, RRCEM

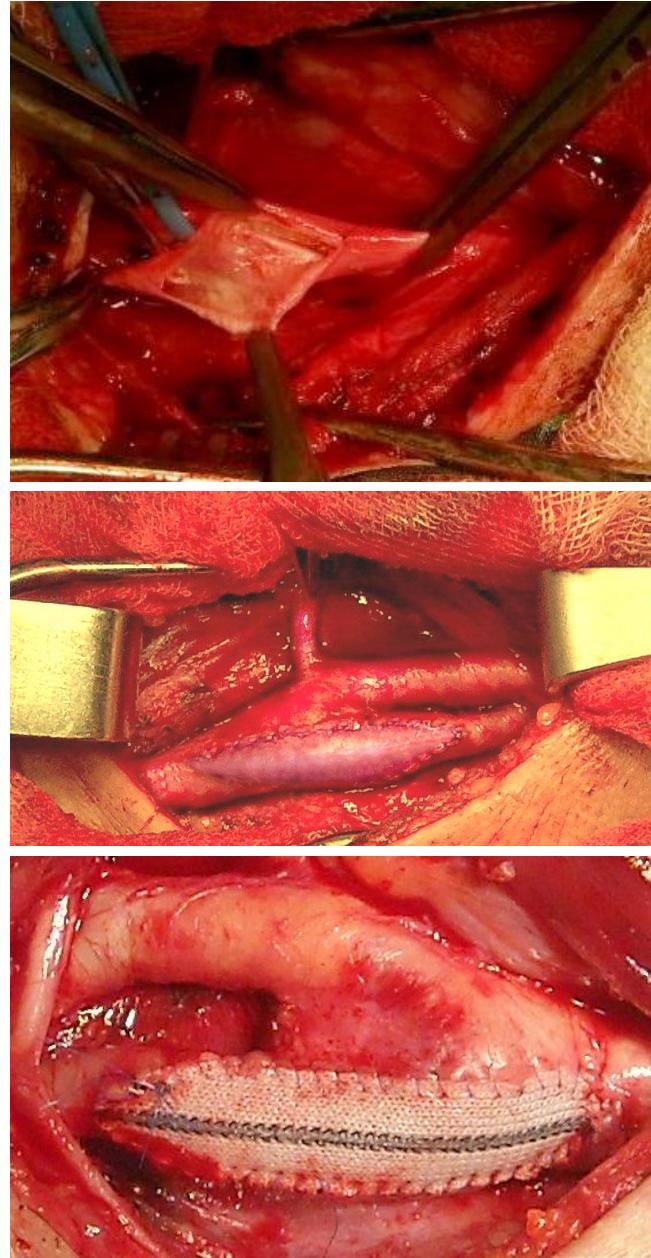
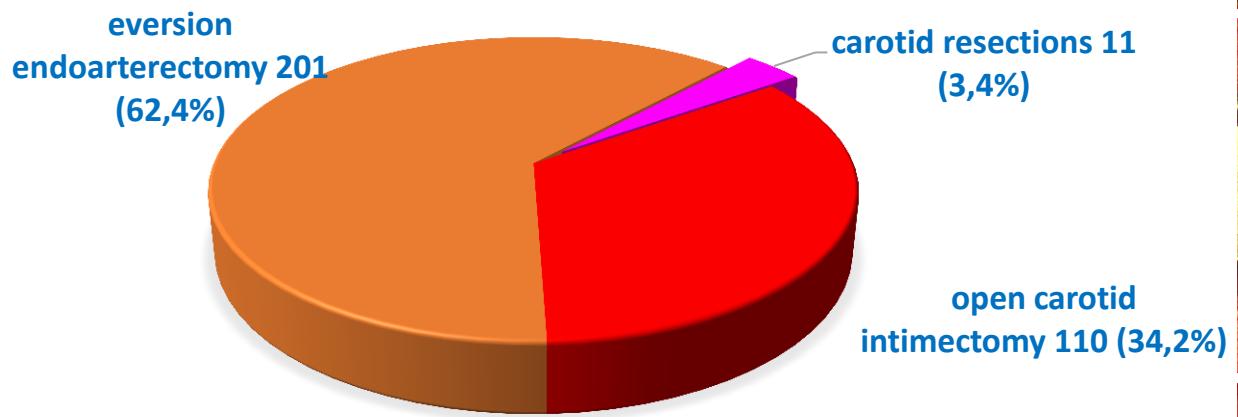


Brain CT-scan	2440
CT-angio	91
Brail MRI	210
Cerebral angio	66
Doppler	1521

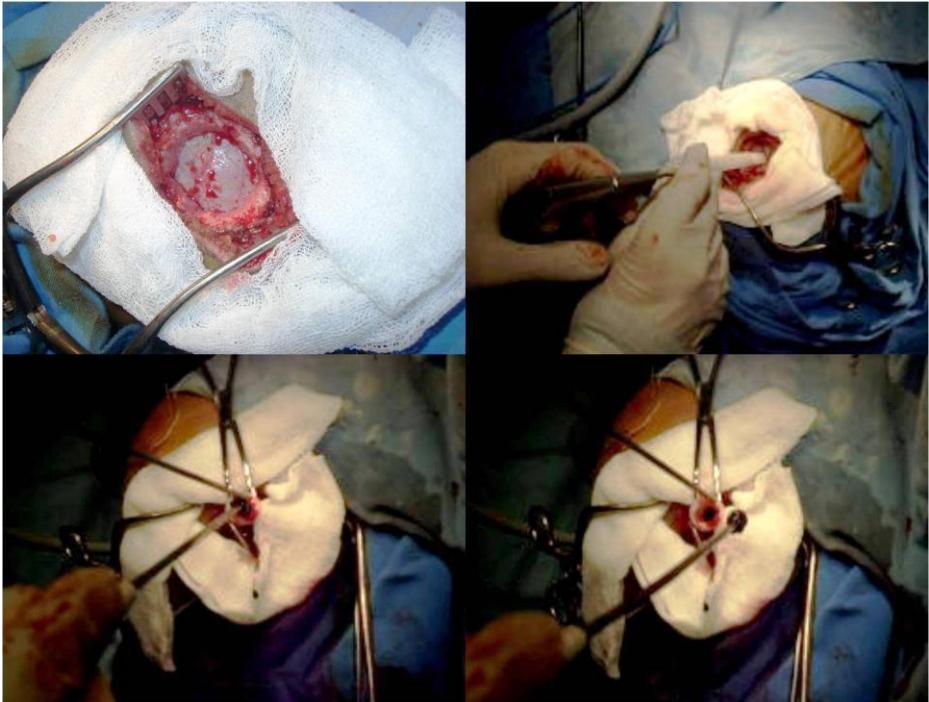
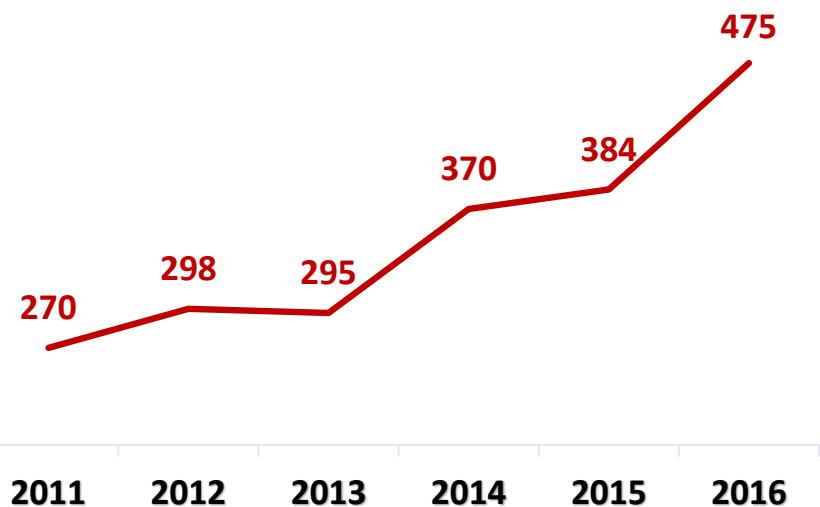


# Brain' surgical revascularization

(RRCEM, n=322)



# HAEMORRAGIC STROKES IN RRCEM, 2016



# Brain vessel's aneurisms clipping



62

38

12

4

Total experience (2015-2018)  
96 patients  
116 aneurisms

1та аневризма

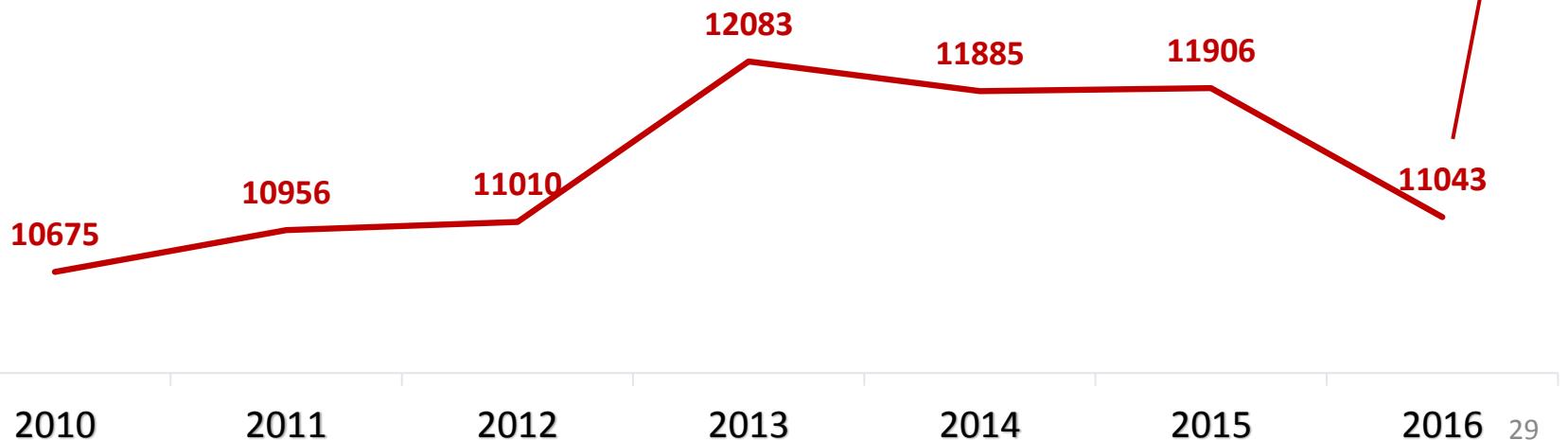
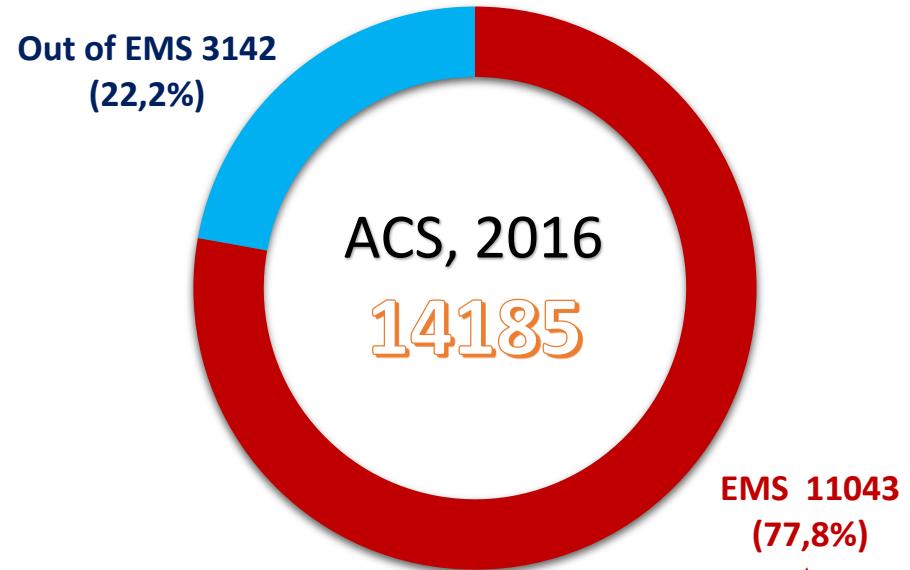
2та аневризмы

3та аневризмы

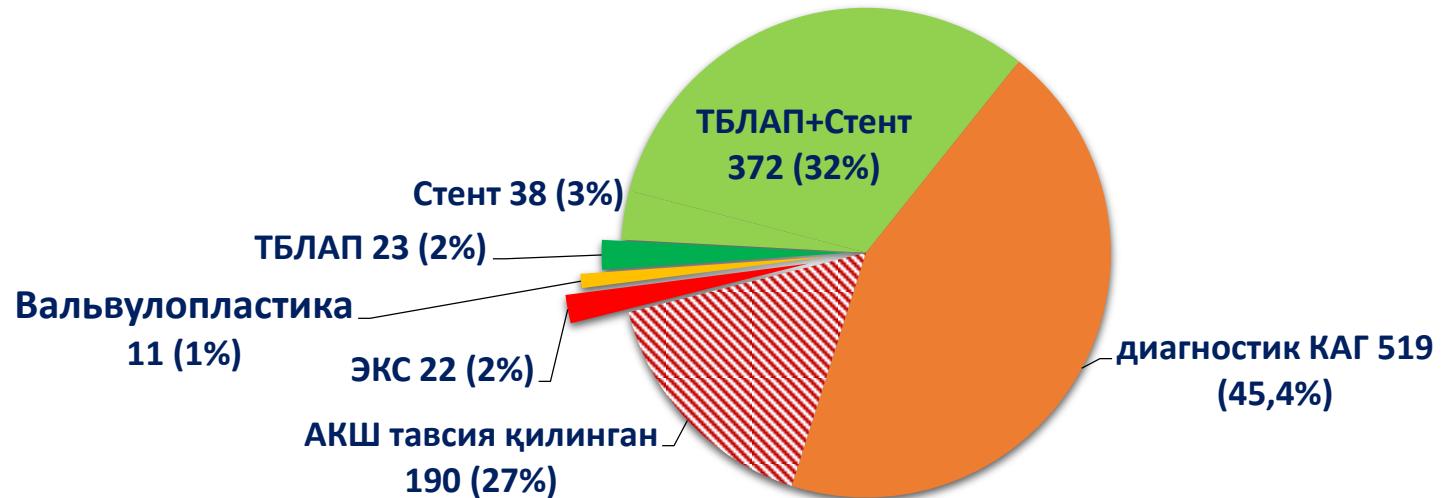
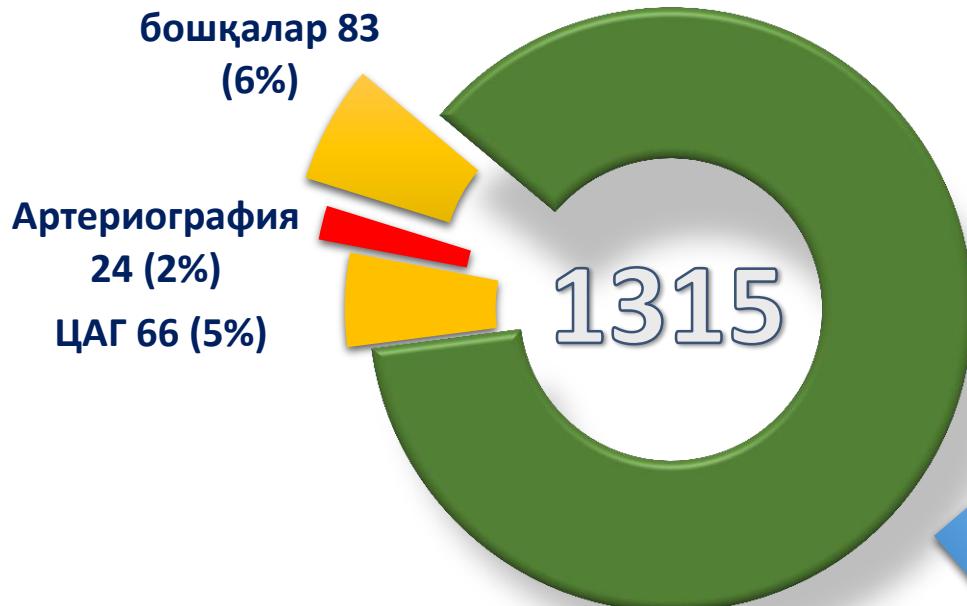
4та аневризмы

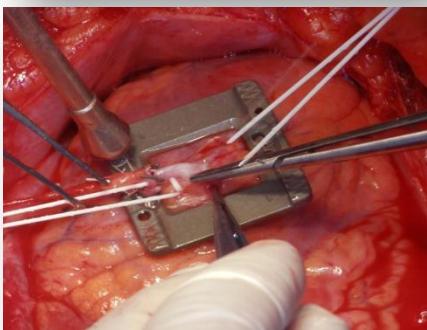
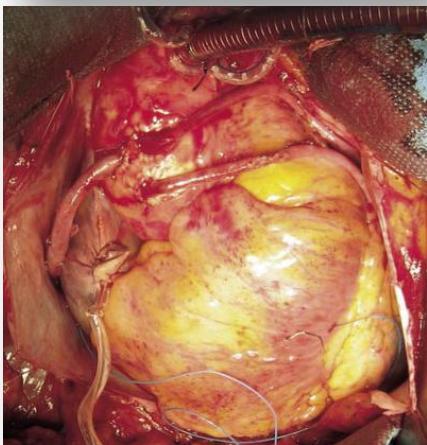
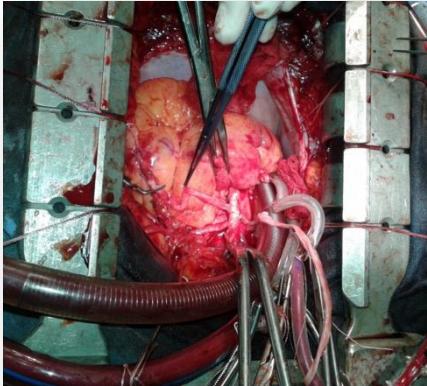
28

## Acute coronary syndrome

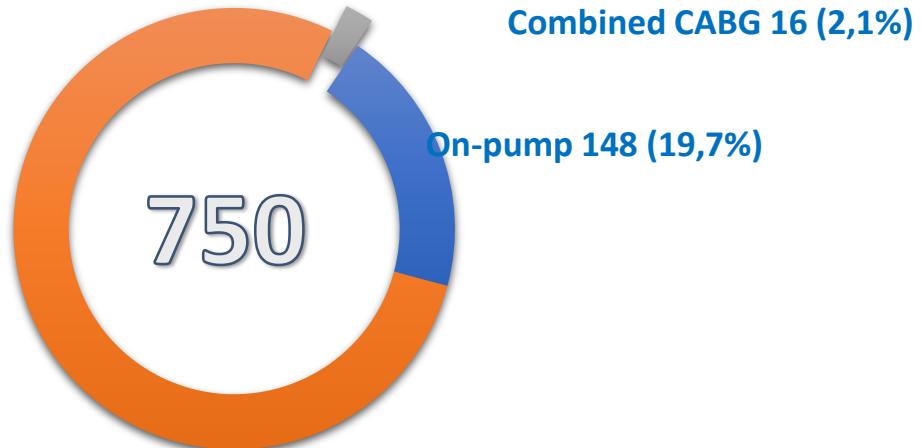


## CATH LAB ACTIVITY, 2016





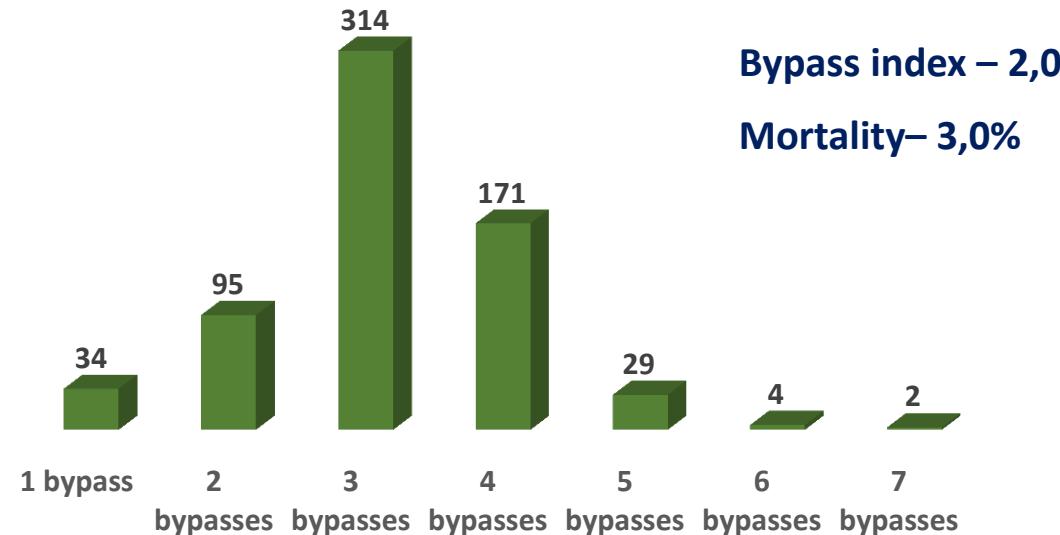
# CABG IN RRCEM, 2010-2016



Off-pump 586 (78,1%)

Combined CABG 16 (2,1%)

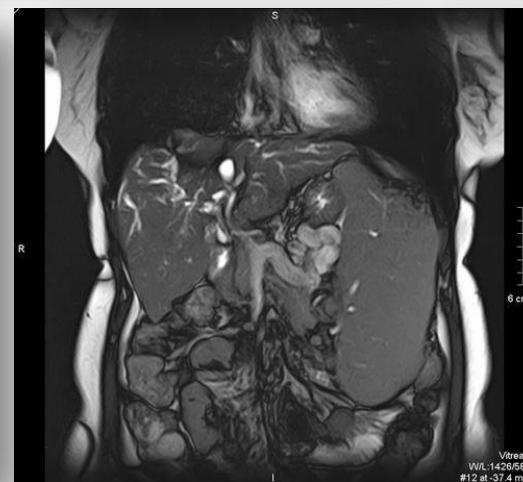
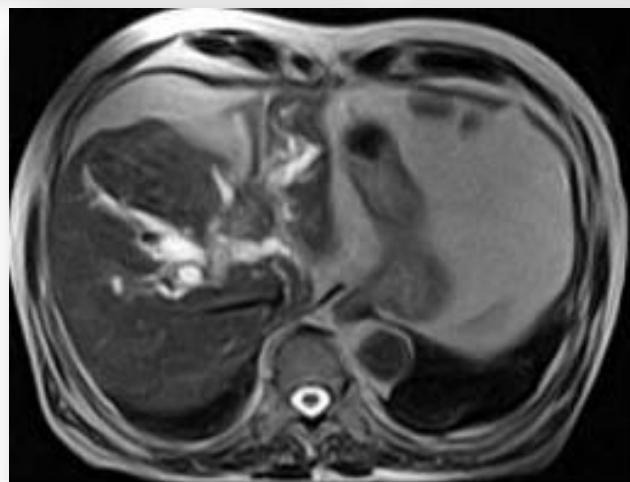
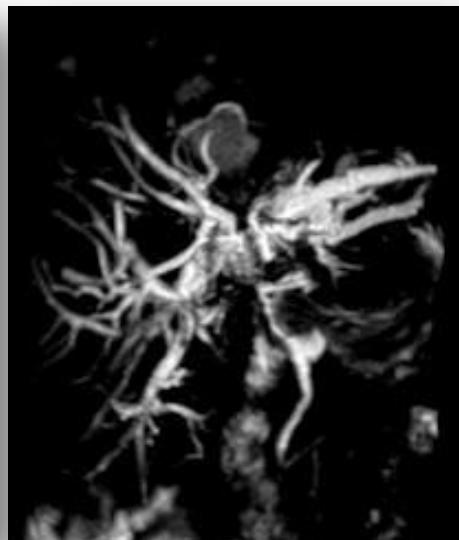
On-pump 148 (19,7%)



Bypass index – 2,0

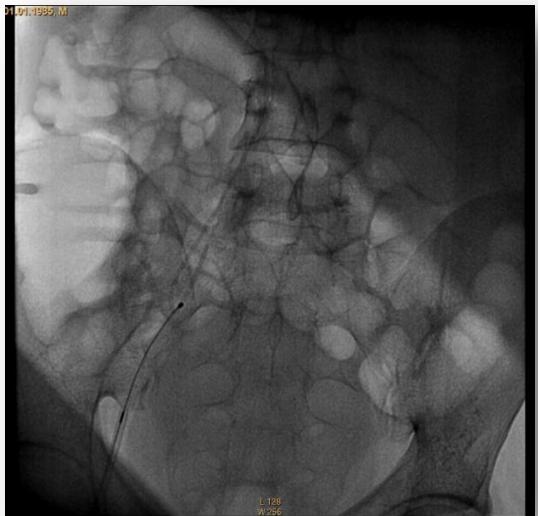
Mortality– 3,0%

# Routine implementation of technologies



МРТ-холангиография

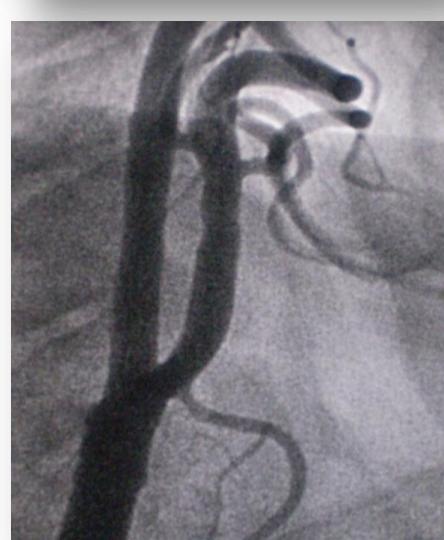
# Routine implementation of technologies



Пастки кавак венадан ёт  
жисмни олиб ташлаш

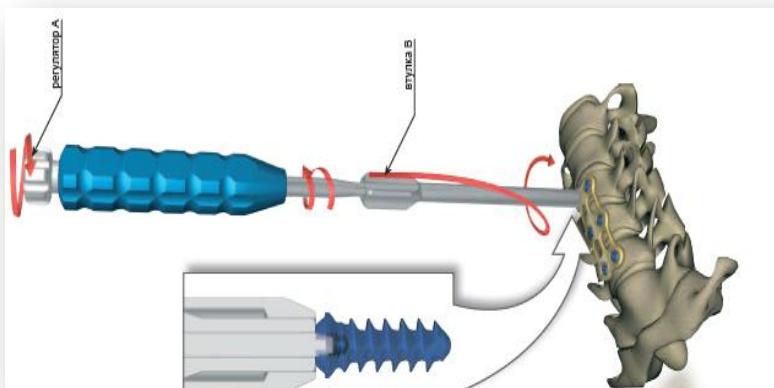
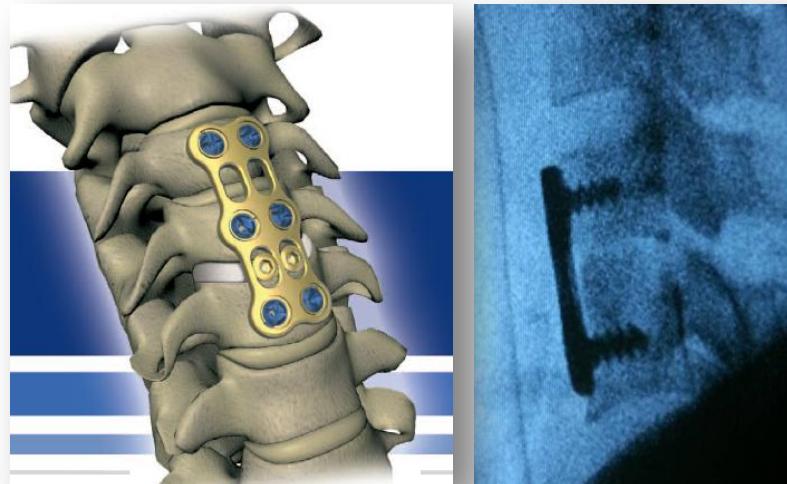


Буйрак артериясини стентлаш



Уйқу артериясини стентлаш

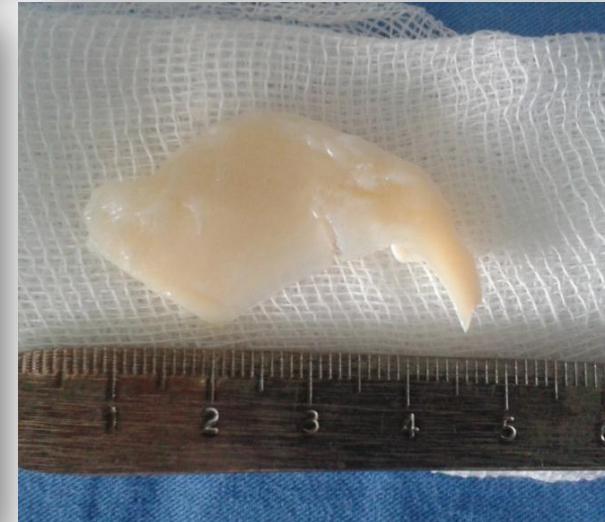
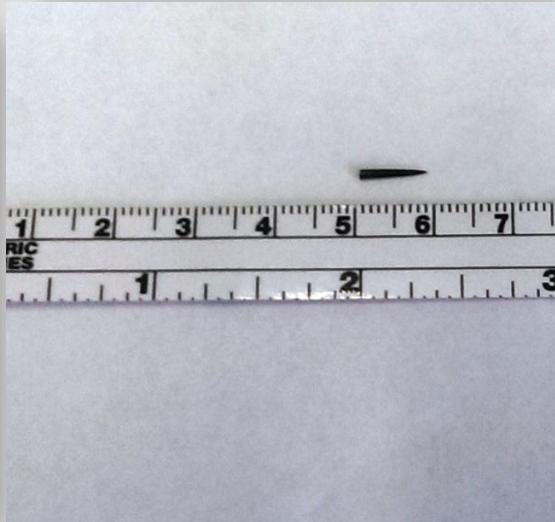
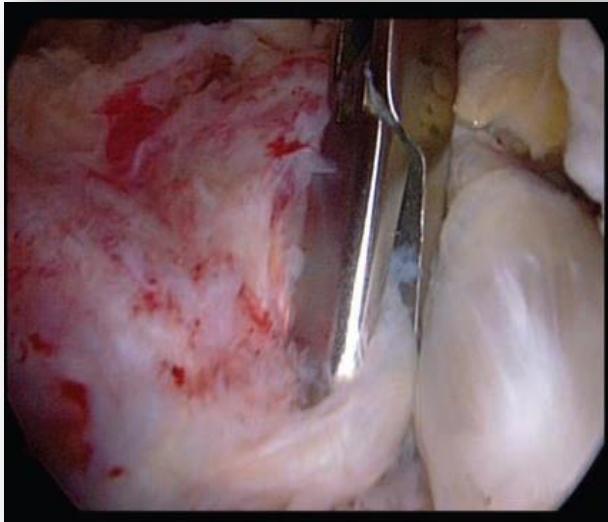
# Routine implementation of technologies



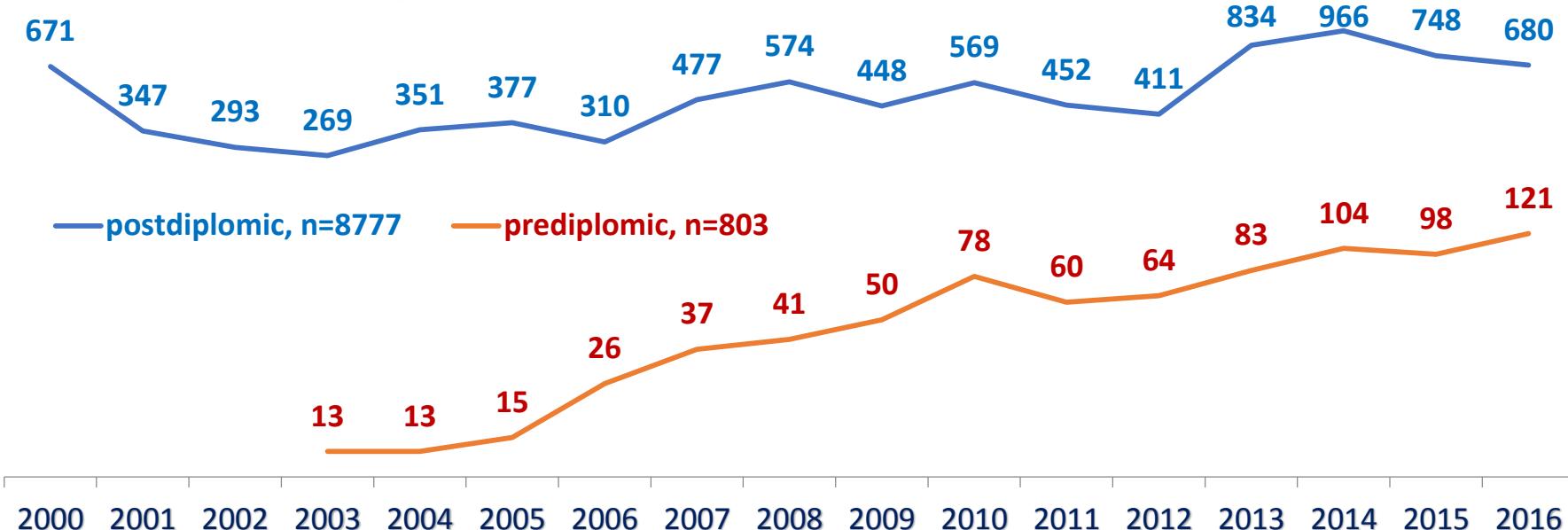
before

after

# Modern technologies



# Staff training, 2017



Dissertation thesis:  
Doctor of science – 14  
Doctor of philosophy – 56

In 2016, 443 scientific papers have been published, including 94 scientific articles, 12 of them in the Commonwealth countries and 14 in foreign editions.

# INTERNATIONAL LINKS, 2018

## Partners:

1. EurAsia Heart (Swiss)
2. ATUDER (Turkey)
3. Baskent University (Turkey)
4. Ege University (Turkey)
5. SNU, Bundang Hospital
6. Save the children-Korea
7. Helsinki Medical University
8. Djanelidze Research Institute (St Petersbourg)
9. Sklifsovskiy Research Institute (Moscow)
10. Burdenko Research Institute (Moscow)
11. Bashkent University (Turkey)
12. Inje Ilsan Paik hospital (Korea)
13. Avicenna Fund, France
14. ICRC (Geneve)
15. KOICA (Korea)
16. KOFIH (Korea)
17. JICA (Japan)
18. TIKA (Turkey)
19. GIZ (Germany)
20. Fullbright programm (USA)
21. MASHAV (Israel)



# SHOSHLINCH TIBBIYOT AXBOROTNOMASI

O'zbekiston shoshilinch tibbiy yordam vrachlar assotsiatsiasi jurnali

## Вестник экстренной медицины

Научно-практический журнал ассоциации врачей  
экстренной медицинской помощи Узбекистана

2009, N1

Ilmiy-amaliy jurnal

[www.sta.uz](http://www.sta.uz)

Министерство здравоохранения Республики Узбекистан  
Ассоциация врачей экстренной медицинской помощи Узбекистана

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Ilmiy-amaliy jurnal

2009, N1

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«THE BULLETIN OF EMERGENCY MEDICINE»  
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Главный редактор А.М.ХАДЖИБАЕВ

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# **THE BENEFITS OF A SINGLE WHOLE SYSTEM OF EMERGENCY CARE:**

- 1. It is much easier to provide aimed financial and technical support in terms of single system , which will guarantee availability for all people and integrating of high technologies.**
- 2. Possibility of implementation and continuous optimization science-based standards of managing of emergency cases through single methodic center.**
- 3. Providing of continuous monitoring of activity of all EMS members, which will increase mobility of System managing and administration.**
- 4. This structure of EMS allows create quick and effective measures during disasters.**

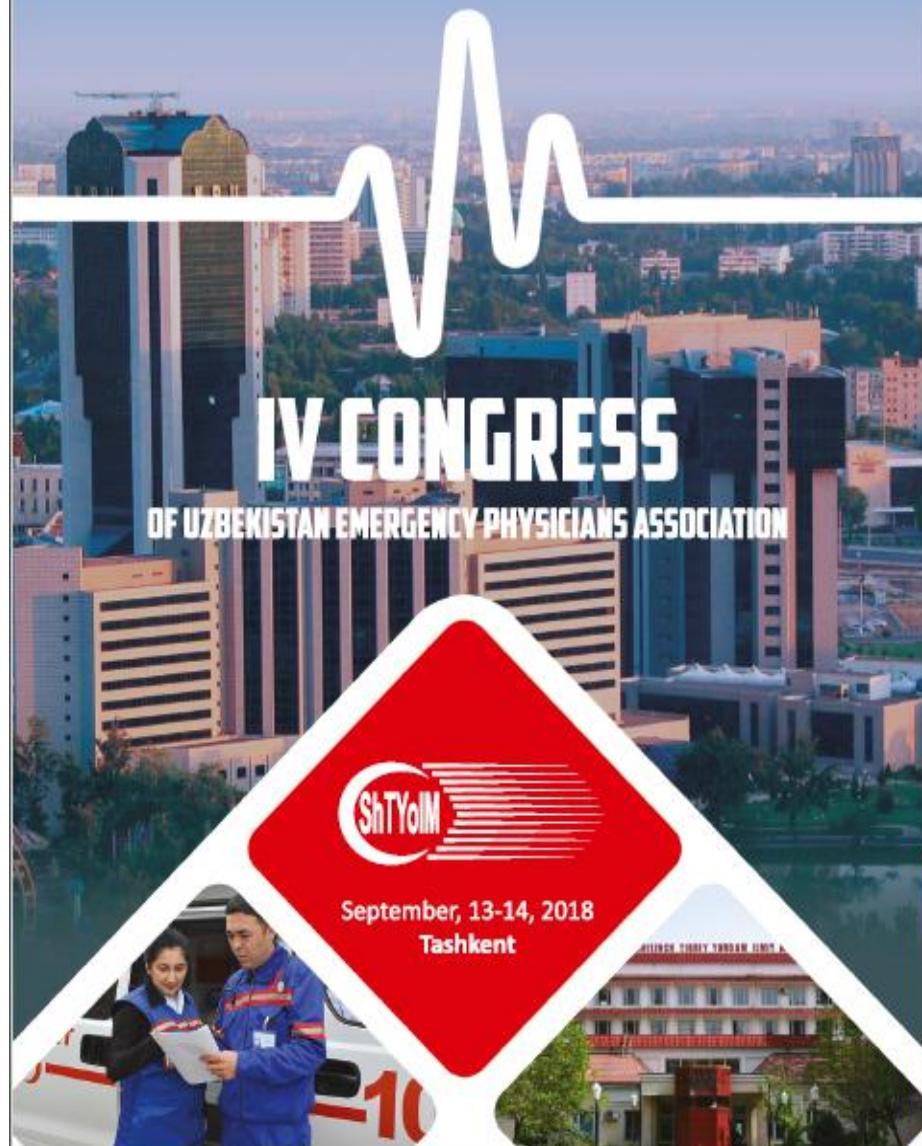
HEALTH MINISTRY OF THE REPUBLIC OF UZBEKISTAN  
REPUBLICAN RESEARCH CENTER OF EMERGENCY MEDICINE  
UZBEKISTAN EMERGENCY MEDICINE PHYSICIANS ASSOCIATION

# IV CONGRESS

OF UZBEKISTAN EMERGENCY PHYSICIANS ASSOCIATION



September, 13-14, 2018  
Tashkent



## Congress subjects:

1. Organization of emergency medical care at pre- and hospital stages.
2. Minimally invasive intervention in urgent surgery of the thorax and abdomen.
3. Modern management of combined injuries, polytrauma and combined injuries.
4. Emergency medical care in pediatrics, acute surgical diseases and injuries in children.
5. Intensive care for critical conditions in cardiology, neurology and toxicology.
6. Issues of anesthesiology and of resuscitation in emergency surgery.
7. Young scientists contest.

## Abstracts requirements:

Abstracts' volume must be not more than 2 pages, A4, Times New Roman, 12, 1,5 interval, electronic variant is obligatory. It is also required to note postal address, phone number, fax, e-mail and to mention whether you want to make a report, to present it as a poster or only to publish an abstract in the abstract book. The name of one author can be published as the first one not more than in three abstracts. There will be a "Young scientists contest" within the Conference in mono-authorship (not elder 35 years to the time of submission). Early published works will be not accepted. Explicitness of stating goals and issues, the weight of evidence ( personal data, statistics, bibliography), consistency of conclusions, style will be estimated. First three places will be awarded. Abstracts being accepted for the contest must be followed by biographic data about the age, education, work experience, winning at the scientific contests.

Abstracts application deadline: June, 1, 2018.

Abstracts submitted after the deadline and made without all above mentioned requirements will not be excepted.

BOOK THE DATE  
13-14.09.2018

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Republican Research Centre of Emergency Medicine.

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Subject: IV Congress of Uzbekistan Emergency physicians Association

Organizational committee.

**Thank you for your attention!**

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