



AMOSOV NATIONAL INSTITUTE  
OF **CARDIOVASCULAR** SURGERY

# Achievements of the Amosov National Institute of **Cardiovascular** Surgery



Director of  
Amosov National Institute of Cardiovascular  
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Academician, Professor  
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# The capabilities of Amosov Institute as the leading cardiac surgery center



Year of foundation – **1955** year

National State Institution

Total experience – more than **200.000** operations

Areas of activity: medical, scientific, educational

Number of operations per year: **4.700 – 5.200**

Number of treated patients: **6.400 – 7.200**

Number of outpatient patients, who have been consulted: **43.700 – 45.000**

Number of employees: **1081**

# Amosov Institute – main Cardio surgical centre of Ukrainian Leading



**360** hospital beds



**20** departments



**16** operating rooms



**1** polyclinic



**5** laboratories

**40000** patients are consulted

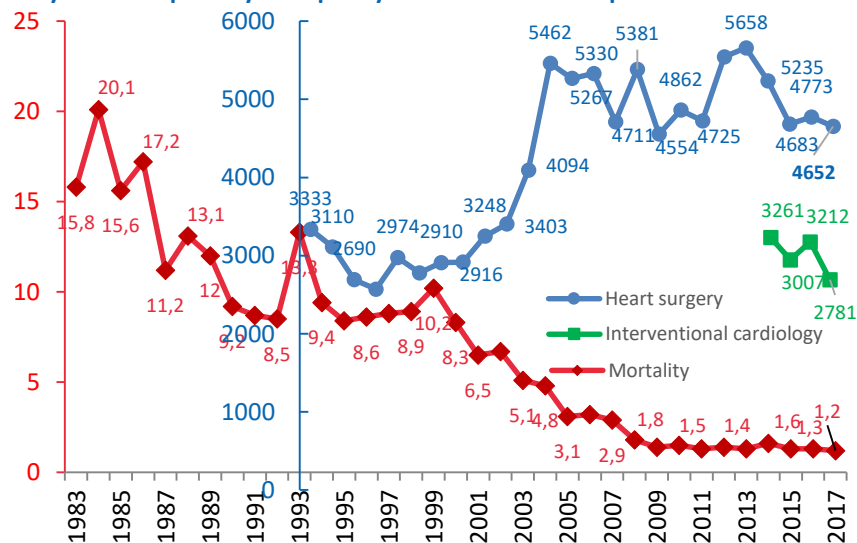
**7500** surgical manipulations



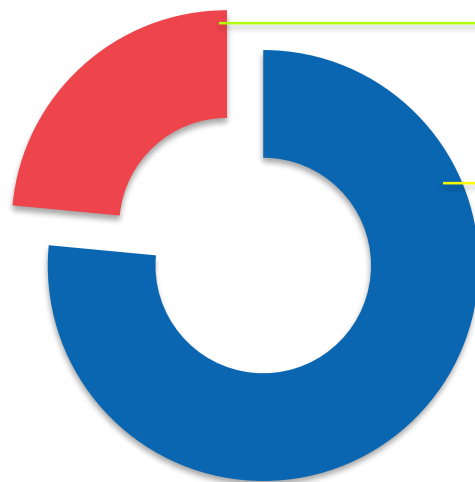
**6** faculties

per 1 year

Dynamic of quantity and quality of cardio-vascular operations



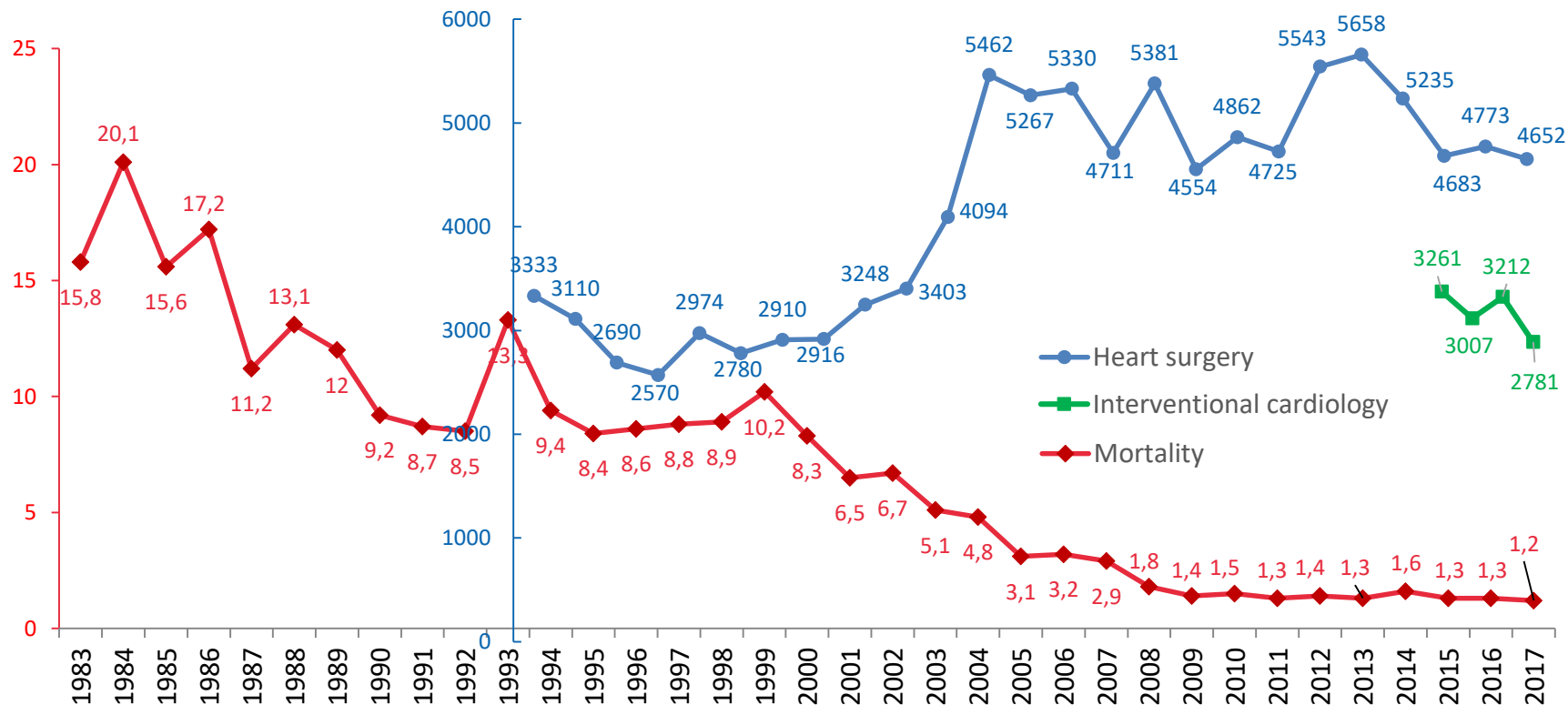
Amosov Institute in the framework of providing cardiac surgical care in Ukraine



**23,5%** of cardio-surgical care is provided by Amosov Institute (**4652** operations in 2017)

cardio-surgical care is provided by 39 cardio centers, of which 29 are operated on open heart (**15381** operations in 2017)

# Dynamic of quantity and quality of cardio-vascular operations



# Amosov Institute – Ukrainian Leading Cardio surgical centre



- Unique professional staff
- 60 years experience cardiac surgery school
- Unique experience – **200.000** interventions
- The leader in all fields of Cardiac Surgery science and practice
- In Amosov Institute the most complex cardiac patients have been managed
- The cradle of the national cardiac surgery school (**39** new cardiac surgery centers was founded by the staff of Amosov Institute)
- Unique scientific-practical potential of the national medicine is concentrated in Amosov Institute

Academicians of NAMS of Ukraine	<b>3</b>
Corresponding member of NAS of Ukraine	<b>1</b>
Professors	<b>7</b>
Doctoral of Sciences degree	<b>16</b>
MD, PhD degree	<b>52</b>

# Amosov Institute – Certification & Accreditation



## IV level of accreditation as a Scientific-Educational Institution

There are **6** faculties in  
Amosov Institute:

- 1** Faculty of the National  
academy of postgraduate  
education
- 2** Faculty of National medical  
University
- 3** Faculty of bio-medical  
engineering of Kiev National  
Technical University “Igor  
Sikorskiy KPI”

## Highest level of accreditation

of medical-diagnostic  
institution  
All laboratories are  
certified

All departments of the  
institution are licensed

## The Quality of Treatment is certified according ISO 9001



# The capabilities of Amosov Institute as the leading cardiac surgery center



## 36 INTERVENTIONS PER DAY

- 15** cardiac surgeries
- 15** cardiac invasive procedures
- 4** Urgent cardiac surgeries
- 2** pediatric cardiac surgeries

## PER YEAR

- 40.000** consultations in outpatient department
- 5000** Cardiac operations
- 3 000** Cardiac invasive procedures

# The capabilities of Amosov Institute as the leading cardiac surgery center



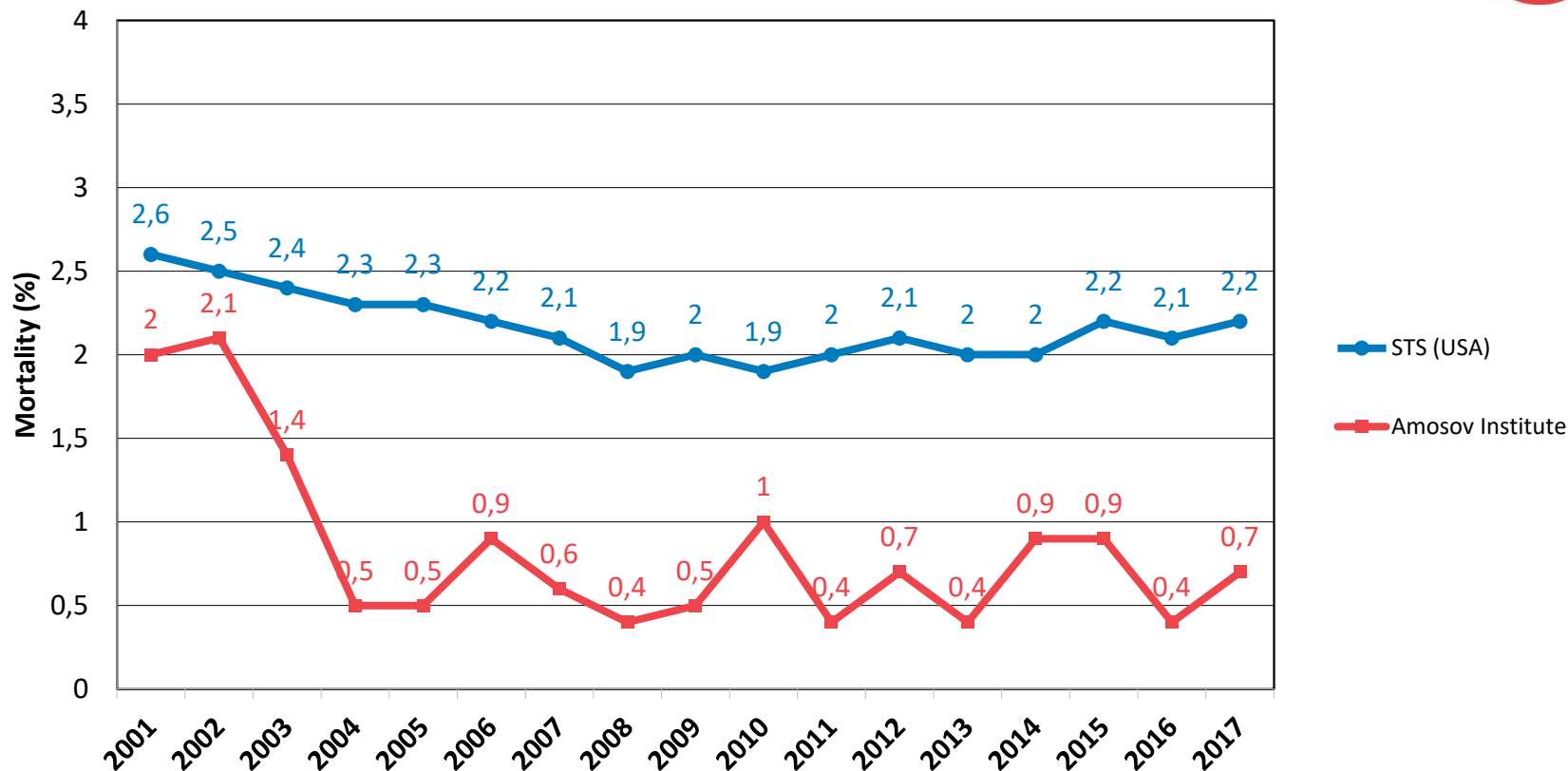
## Off-pump CORONARY ARTERY BYPASS GRAFTING 95% of cases

- Unique experience – **11.000** of CABG patients
- Mortality – **0,5%**
- New technology of CABG in patients with diabetes was created – **1450** of CABG patients, mortality – **0,3%**





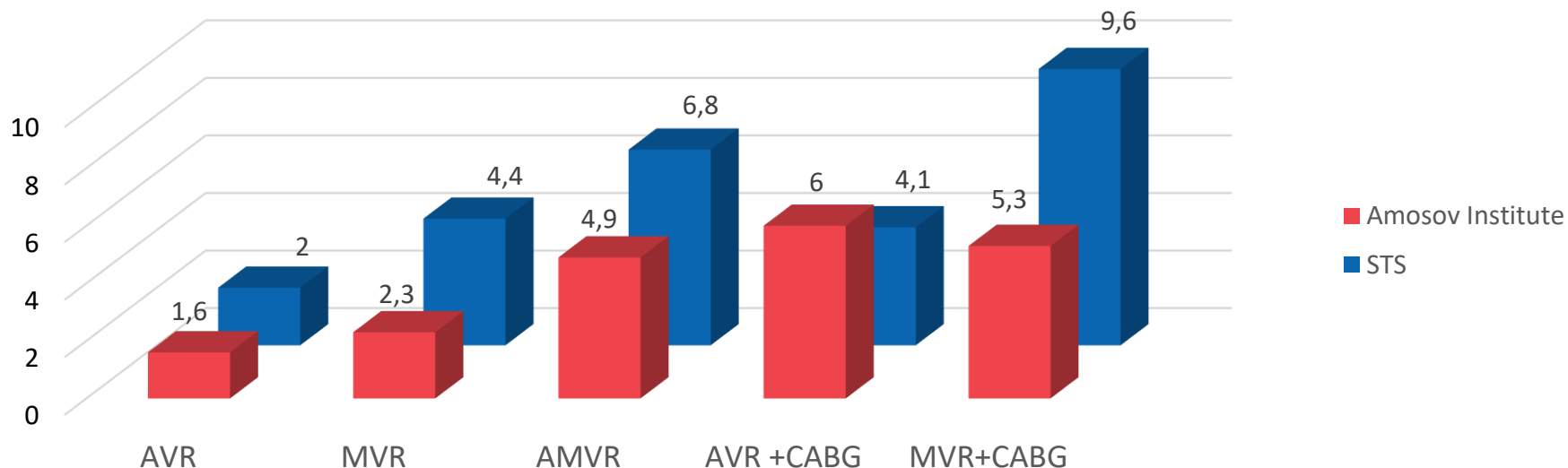
# Amosov Institute Off-pump CORONARY ARTERY BYPASS GRAFTING mortality level comparing with STS



# The capabilities of Amosov Institute as the leading cardiac surgery center



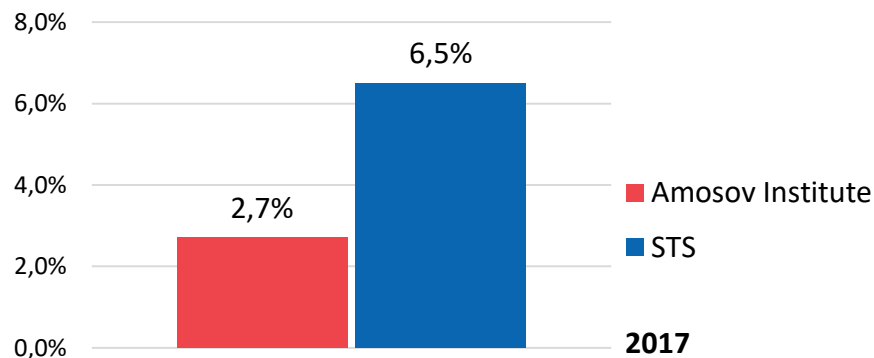
**Total number of HEART VALVES REPLACEMENTS – 50.000**



# The capabilities of Amosov Institute as the leading cardiac surgery center



The only one cardiac surgery institution in Ukraine, where routine and high quality care is provided to patients with PATHOLOGIES of the AORTA, including acute ANEURYSMS and its dissection and hybrid procedures



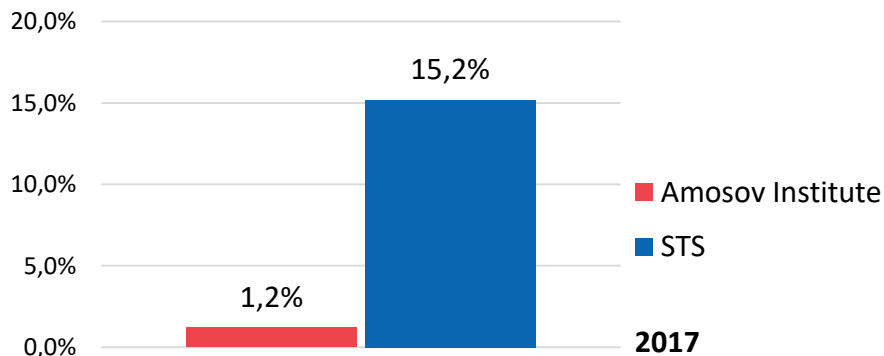
Performed – **1217** operations with mortality **2,7%**  
**362** dissection with mortality **3,3%**

# The capabilities of Amosov Institute as the leading cardiac surgery center

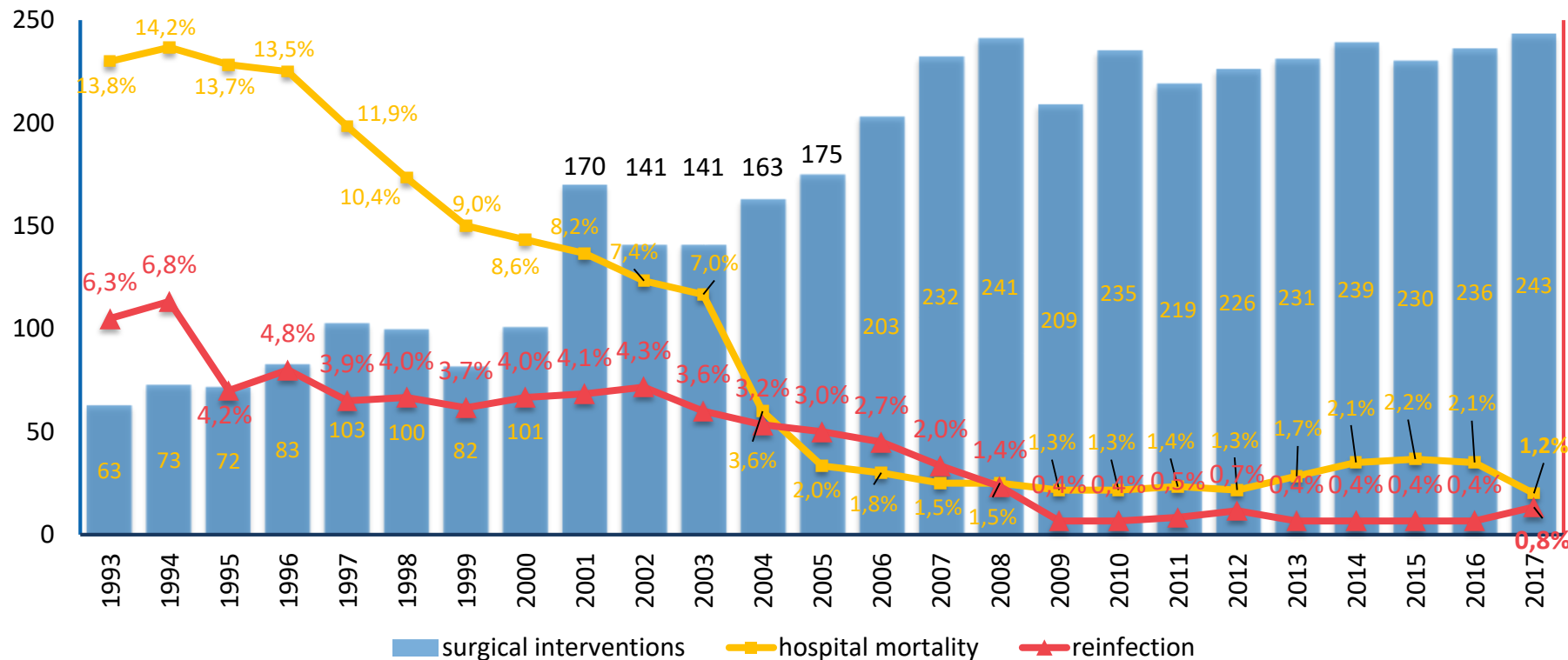


## **UNIQUE** world's experience in surgical treatment of **INFECTIVE ENDOCARDITIS**

- performed – more than **4.000** operations with unprecedented high levels of quality
- mortality – **1,2%**



# Value of surgical interventions for **Infective Endocarditis**, hospital mortality and reinfection



# Infective Endocarditis treatment result



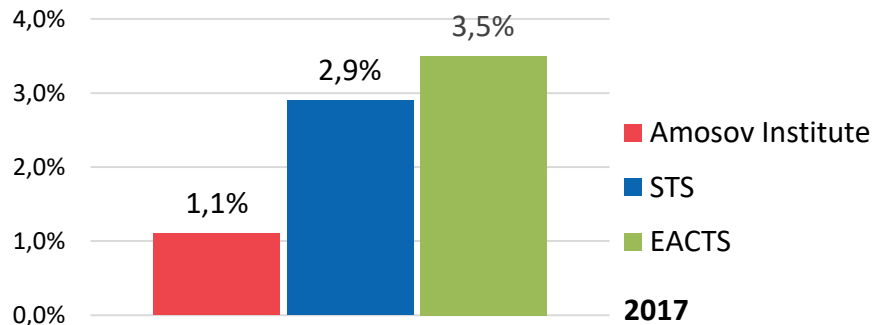
Authors, year	Quantity	Mortality		Recedive Quantity	
		n	%	n	%
<b>Krykunov (NICVS Amosov), 2017</b>	<b>236</b>	<b>5</b>	<b>1,2</b>	-	-
Pericart, 2016	249	9	4,0	-	-
Perrotta, 2016	254	22	8,7	18	8
F. van den Brink, 2016	84	16	19,0	-	-
Murai, 2016	103	6	5,8	5	4,8
Pang, 2015	191	12	6,3	-	-
Onorati, 2015	711	36	5,1	-	-
Wang, 2015	146	10	6,8	-	-

# The capabilities of Amosov Institute as the leading cardiac surgery center



## CONGENITAL HEART DISEASES high quality surgery

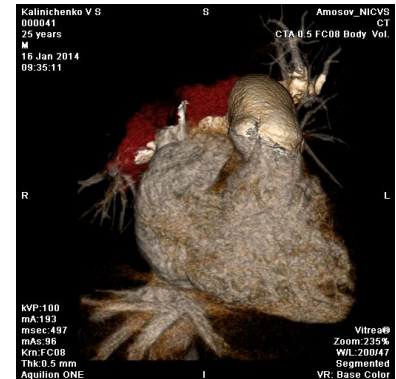
- All types of operations
- Hypoplasia of the left heart - treatment program started from 2010 year
- Annually **500-600** pediatric cases
- Performed – around **35.000** operations, **4.978** endovascular with mortality **0,1%**
- Mortality had decrease from **27% (in 1983)** to **1-2% (at present)**



# The capabilities of Amosov Institute as the leading cardiac surgery center



- UNIQUE experience in heart rhythm disorders surgery on expert level, including newborns
- UNIQUE experience of **740** heart tumors surgery cases with **0%** mortality from last **17** years.
- UNIQUE experience of circulatory assistance and mechanical heart-lung support.
- UNIQUE for Ukraine experience of cardiomyopathies surgical treatment





# OBSTETRIC CARDIOLOGY AND CARDIOSURGERY



- Created multidisciplinary team (from 2013)
- Consulted more than **2.000** pregnant
- Open-heart, roentgen-endovascular and “Hybrid” more than **50** operations
- Emergency cardiac surgery in pregnant
- Cesarean section in pregnant from high-risk group by WHO classification “on-site” in the Institute (**25** during last 2 years)



# PROMOTION OF NEW TECHNOLOGIES IN UKRAINE & ABROAD

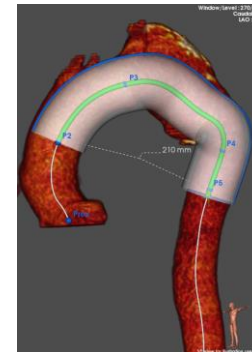


- Every year allukrainian and international congresses of cardio-vascular surgeons are performing
- Groups of medical staff from the Institute are visiting different regions of Ukraine for:
  - Consultations of patients (separately pediatric and adults)
  - Lectures and workshops for regional physicians
- 2015 -2017:
  - **62** visits for all regions of Ukraine, including Mariupil, Kramatorsk, Severodonetsk
  - **48** colleagues from Institute took part in the project
  - consulted **2341** children and **1967** adults
- Annually **5** monographies, **100** manuscripts, **70** abstracts are printing

# New scientific-practical topics of Amosov Institute



- OBSTETRIC CARDIOLOGY AND CARDIOSURGERY
- URGENT AND EMERGENCY CARDIOSURGERY (13-14% of pts annually)
- MINIINVASIVE and LOW-IMPACT CARDIOSURGERY (the best experience in Ukraine)
- ENDOVASCULAR SURGERY
- HYBRID OPERATIONS FOR THE TREATMENT of AORTICS ANEURISMS
- STEAM-CELL Therapy
- FETAL CARDIOSURGERY (in development)
- HEART TRANSPLANTATION AND HEART ASSIST DEVICES (in development)
- BIOMEDICAL ENGINEERING (an experience more then 8 years)





AMOSOV NATIONAL INSTITUTE  
OF **CARDIOVASCULAR** SURGERY

We were the first, we are the  
first and we have to remain  
being leaders