



Asfendiyarov Kazakh National Medical University



## REGULATIONS

### I International student Olympics

«CAOSalmaty» - 2019

in surgery and morphology ,

dedicated to the 85th anniversary of the Department of Surgery №1  
and the 85th anniversary of the Department of Clinical Anatomy and Operative  
Surgery,  
**14-17 May 2019**

«Applied anatomy saves lives!»

**1<sup>st</sup> Day - May 14 , 2019 - Surgery Unit**

Time	Event	Location ( see the map)
9.30-10.00	check in	Theater " Concordia "
10.00-11.00	OPENING Olympics : 1. Welcome address by rector of Asfendiyarov Kazakh National \medical University Nurgozhin Talgat Seitzhanovich 2. Welcome word 3. Presentation of the jury of the Olympiad 4. Draw teams	Theater " Concordia " (theater)
11.00-13.00	Team card	Theater " Concordia "
13.00-14.00	<b>Dinner</b>	
14.00-18.00	The first 6 teams according to the draw pass 4 skills : 1. Diagnostic laparoscopy 2. Intracorporeal hand coordination	Laboratory of Experimental Medicine Research Institute named after B. Atchabarov(4)
14.00-15.00 15.00-16.00	3. Surgical instruments 4. Skin plastic suture	Anatomical building, 2nd floor, room number 218 ( Intro I ,Intro VII )
14.00-16.00	The second 6 teams according to the draw simultaneously pass 5 skills : 1. Intestinal suture 2. Vascular suture 3. Tendon suture 4. Parenchymal suture 5. Reconstructive plastic surgery	Center for practical skills named after K. Kozhakanov (7)



## Asfendiyarov Kazakh National Medical University



### 2<sup>nd</sup> Day - 15 May 2019 - Surgical part

Time	Event	Location ( see the map)
9.30-10.00	Warmup for surgeon's fingers	Hall of Glory Rectorate , second floor (1)
10.00-11.00	Knots	Hall of Glory Rectorate , second floor (1)
11.00-12.00	Surgical Case	Hall of Glory Rectorate , second floor (1)
12.00-13.00	Presentation of the Student society CAOS Almaty	Hall of Glory Rectorate , second floor (1)
13.00-14.00	<b>Dinner</b>	
14.00-16.00	The first 6 teams according to the draw simultaneously pass 5 skills : <ol style="list-style-type: none"> <li>1. Intestinal suture</li> <li>2. Vascular suture</li> <li>3. Tendon suture</li> <li>4. Parenchymal suture</li> <li>5. Reconstructive plastic surgery</li> </ol>	Center for practical skills named after K. Kozhakanova (7)
14.00-18.00	The second 6 teams according to the draw Pass 4 skills : <ol style="list-style-type: none"> <li>1. Diagnostic laparoscopy</li> <li>2. Intracorporal hand coordination</li> </ol>	Laboratory of Experimental Medicine Research Institute named after B. Atchabarov(4)
14.00-15.00 15.00-16.00	<ol style="list-style-type: none"> <li>3. Surgical instruments</li> <li>4. Skin plastic suture</li> </ol>	Anatomical building, 2nd floor, room 218 ( Intro I ,Intro VII )
19.00-21.00	Gala dinner	



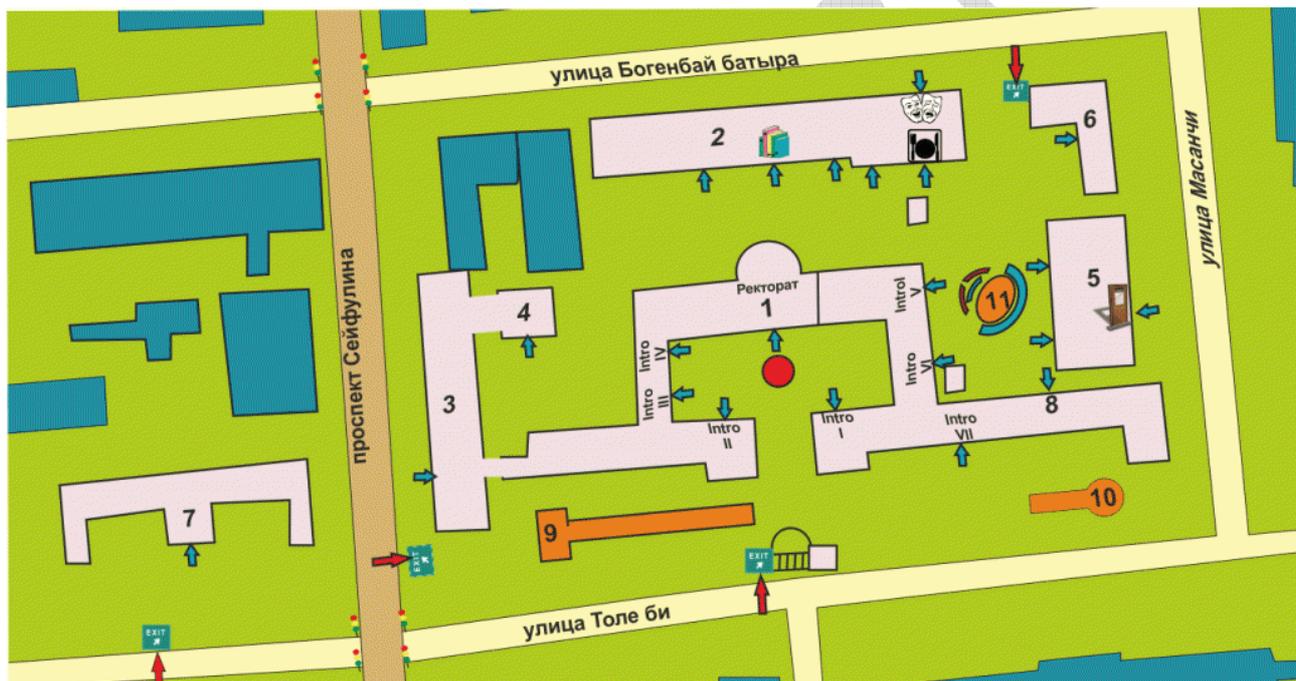
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### 3<sup>rd</sup> Day - May 16, 2019 - Morphological part

Time	Event	Location ( see the map)
9.30-10.00	Anthem of CAOSalmaty	Hall of Glory, Rector's Administration, second floor (1)
10.00-10.30	1. Eponyms of surgeons in anatomical terms	
10.30-11.00	2. Clinical anatomy and visual diagnosis (CT, MRI, Ultrasound and X-rays)	
11.00-11.30	3. Morphological case	
11.30-12.00	4. Pathological anatomy of surgical diseases	
12.00-14.00	CLOSING of Olympiad	
14.00	Excursion	

### Kazakh National Medical University's MAP



#1 Rectorate

#2 Student corpus number 2

#3 Dentistry Institute

#4 Laboratory of Experimental Medicine  
Research Institute named after B. Atchabarova

#5 Student corpus number 7

#6 Student corpus number 5

#7 Center of practical skills

#8 Center of communicative skills

#9 Alley of Heroes

#10 Alley of LIFE

#11 Student's arena



Admission Commission

Canteen

Theater

Library



Asfendiyarov Kazakh National Medical University



Information letter №2

## PROGRAM

Asfendiyarov Kazakh National Medical University

### I International student Olympics

«CAOSalmaty» - 2019

Of surgery and morphology,

dedicated to 85th anniversary of №1 Surgery Department and to 85th anniversary of Clinical Anatomy and Operative Surgery Department, which will be held

**from 14th to 17th May 2019**

General conditions of participation in the Olympics:

- *Dress code: a surgical suit (the disposable surgical dressing gown is admissible), a cap, a mask, gloves, boot covers.*
- *Participants need to bring the required surgical tools and a suture material (except skill No. 7,8,9 and 10).*
- *Use of staplers, glue, a thermocauter and other hardware devices is forbidden.*
- *Randomized approach to competitions is excluded, all teams will pass the same competitions.*
- *Validity of check sheets is high.*
- *Reliability of assessment of skills will be reached by calibration of examiners.*
- *Assessment of a net result and speed of performance (skill No. 1 - 9).*
- *Assessment of process and speed of performance (skill No. 10).*
- *For maintenance of the international Olympics level participating higher education institutions are given an opportunity of drawing up a morphological part of the Olympics on one task for a competition (except a morphological case). By drawing up the full name task of the author and the name of higher education institution will be sounded and shown on a pptx-slide during the Olympic Games.*



**Table of score distribution  
and total score calculation formula**

**Surgical Part (SP)**

<b>№</b>	<b>Skill</b>	<b>Score</b>
1	Diagnostic laparoscopic audit of the top floor of an abdominal cavity on a rabbit (high-fidelity level)	200
2	Intracorporal coordination of hands	100
3	Surgical tools	30
4	Skin suture	50
5	Intestinal suture	100
6	Vascular suture	100
7	Tendinous suture	100
8	Parenchymatous suture	100
9	Reconstructive and recovery operation	100
10	Knots	20
11	Surgical case	50
12	Emergency assistance	50
	<b>Total Score</b>	<b>1000</b>

**Morphological Part (MP)**

<b>№</b>	<b>Competition</b>	<b>Score</b>
1.	Eponyms of surgeons in anatomic terms	250
2.	Clinical anatomy and visual diagnostics (KT, MPT, ultrasonography and X-ray)	250
3.	Morphological case	250
4.	Pathological anatomy of surgical diseases	250
	<b>Total Score</b>	<b>1000</b>

Total score (TS) is calculated by formula:

$$\mathbf{TS = 0,08 * SP + 0,02 * MP}$$



## 1. RECONSTRUCTIVE RECOVERY OPERATION

**Clinical case :** pelvic ureter stricture

**Final result:** formed the Boari anti-reflux mechanism

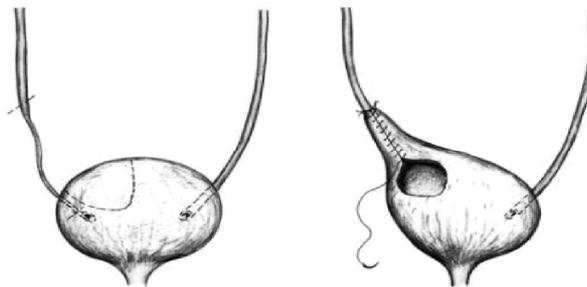
**Time to complete:** 60 minutes

**Number of participants in the brigade:** 2

**Stages of operation:**

1. mobilization of the ureter;
2. resection of the ureter and excision of the flap from the bladder;
3. formation of the vesicoureteral anastomosis;
4. closure of bladder's defect.

Indicative scheme of reconstructive surgery



Competition Evaluation Criteria		Points
1. Quality	The permeability of the lumen of an artificial ureter is checked by forced injection of fluid into the urethra	0-5- 10
	The functioning of the antireflux mechanism is checked by forcing fluid into the bladder.	0-10- 20
	Tightness is checked by pumping fluid into the urethra (in the absence of tightness, the skill should be considered as <b>NOT passed!</b> )	0 to 20
	The absence of suture material in the lumen is checked by opening in the area of the anastomosis.	0-5- 10
2. Speed	Points are subtracted from the increments of 5 points after the first team in time crews (first 4 commands get points)	20
3. Theory	Questions in writing after surgery	20
<b>Total:</b>		<b>100</b>



## 2. TENDON SUTURE

**Clinical case:** Achilles tendon rupture, it was decided to suture Krackow

**End result:** connect the Achilles tendon rupture

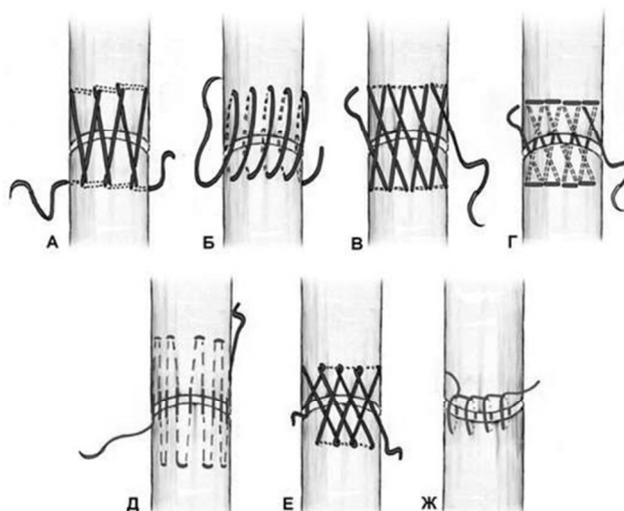
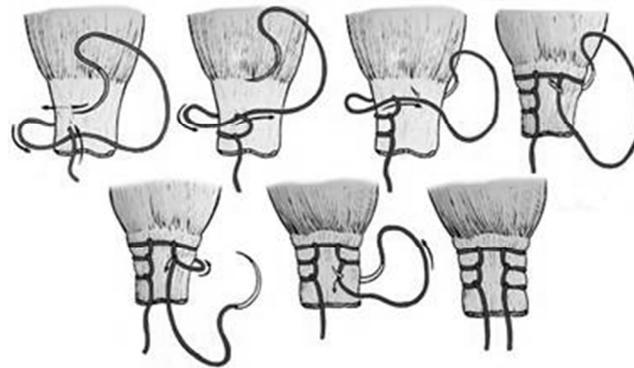
**The number of people in the team :** 2

**Lead time :** 60 minutes

**Stages of operation:**

1. access to the tendon;
2. detachment of paratenon and epitenone;
3. juxtaposition of tendon ends;
4. Krackow main seam overlay;
5. the imposition of the epiteneric adaptive suture (optional);
6. paratenone closure;

Approximate scheme of the Krakow's suture





Competition Evaluation Criteria		Points
1. Quality	Comparison of the edges of the tendon without the "step" and torsion is checked using the label. The absence of spraying the edges of the tendon is checked visually.	0-10-20
	The strength of the seam to break checked suspending a load of 10 kg (when a tendon ruptures, the skill is considered as <b>NOT passed!</b> )	0 to 20
	The presence of diastasis <3 mm <5 mm > 5 mm	0-10- 20
2. Speed	Points are subtracted from the increments of 5 points after the first point in time crews (first 4 commands get points)	20
3. Theory	Questions in writing after surgery	20
<b>Total:</b>		<b>100</b>

### 3. VASCULAR SUTURE

**Clinical case:** a median sternotomy, cardioplegia is performed, a cardiopulmonary bypass is connected, internal thoracic artery is mobilized on the flap and ligated

**The end result:** produced mammaro-coronary shunting using a parachute technique, previously topographically correctly fixed the heart in the chest

**The number of people in the team : 2**

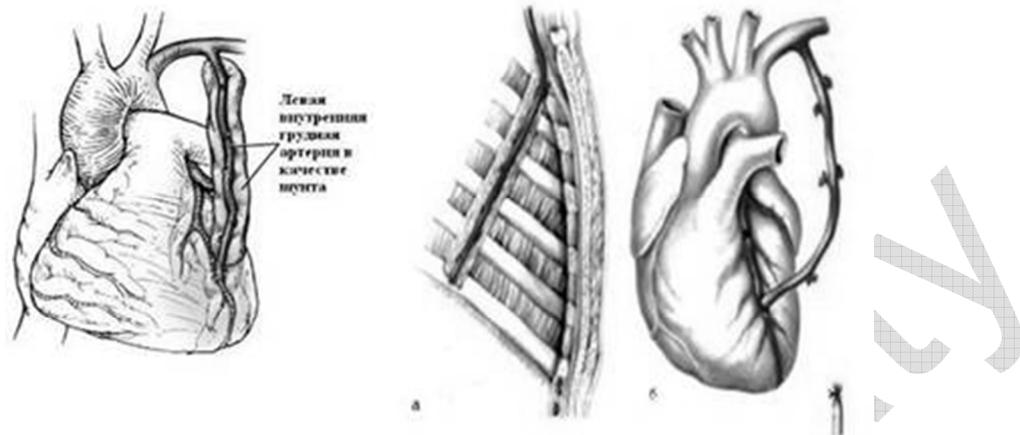
**Lead time : 60 minutes**

**Stages of operation:**

1. fixed the heart in a topographically normal position;
2. imposed a vascular clamp on the internal thoracic artery;
3. performed a hole in the coronary artery;
4. summed the distal end of the internal thoracic artery to the coronary artery;
5. connected the rear wall using a parachute technique;
6. connected the front wall.



The approximate scheme of mammaro-coronary bypass



Competition Evaluation Criteria		Scores
1. Quality	The normal location of the heart is checked according to the surface topography of the heart.	0-10-20
	The tightness of the vascular suture is checked by clamping the coronary artery backing on both sides from the anastomosis of 3 cm, followed by the injection of fluid through the proximal end of the internal chest artery (in the presence of leakage, jet or abundant fluid flow, the skill is considered AS <b>NOT passed!</b> )	0 to 20
	The absence of sagging, intersection of the suture material in the lumen and the eruption of vascular intima is checked visually after opening the anastomosis area	0-10- 20
2. Speed	Points are subtracted from the increments of 5 points after the first team in time crews (first 4 commands get points )	20
3. Theory	Questions in writing after surgery	20
<b>Total :</b>		<b>100</b>

#### 4. PARENCHYMATOUS SUTURE

**Clinical case:** already performed regional liver resection (modeled on the spleen)

**End result:** achieved hemostasis

**The number of people in the team :** 2

**Lead time :** 60 minutes

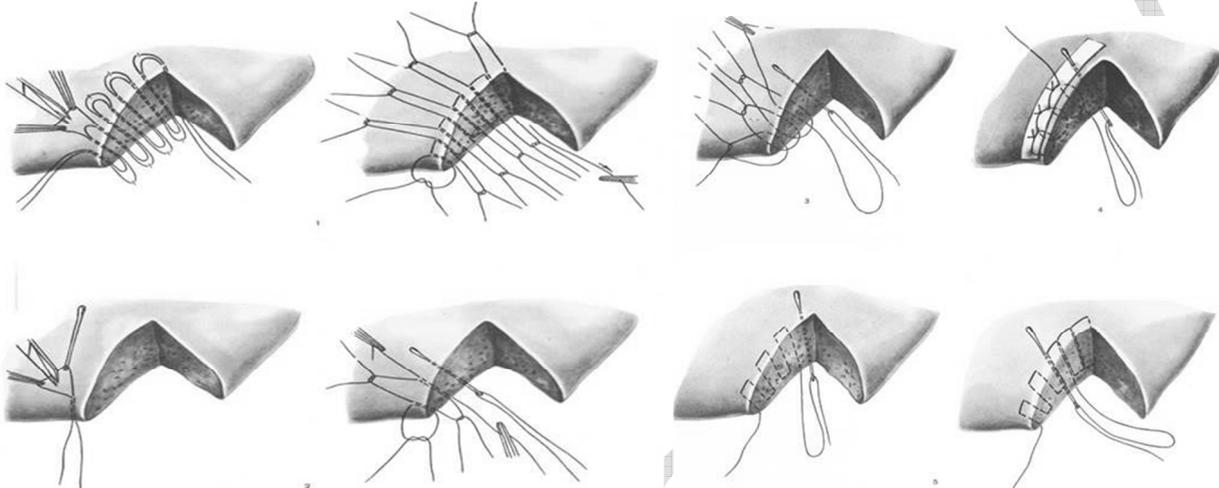
**Stages of operation:**

1. held out Pringle maneuver



2. put a hemostatic suture on the liver;
3. tied ligatures;
4. freed the hepatic triad, restored blood flow;
5. made sure hemostasis

Approximate scheme of hemostatic sutures (optional)



Competition Evaluation Criteria		Points
1. Quality	He avoided blood loss using the Pringle method, checked by the amount of the remaining tinted liquid in the vial connected to the hepatic (splenic) artery	0-10-20
	He has achieved hemostasis of the wound, is checked by applying a dry wipe to the area of the parenchymal wound (in the absence of hemostasis, the skill is considered as <b>NOT passed!</b> )	0 to 20
	No bleeding from the needle puncture sites is checked by applying a dry cloth to the needle area.	0-10- 20
2. Speed	Points are subtracted from the increments of 5 points after the first team in time crews (first 4 commands get points )	20
3. Theory	Questions in writing after surgery	20
<b>Total:</b>		<b>100</b>

## 5. INTESTINAL SUTURE

**Clinical case:** puncture wound of the small intestine, mobilization and resection of the small intestine

**The end result:** put a small-intestinal anastomosis of the type "end to end" double intestinal suture



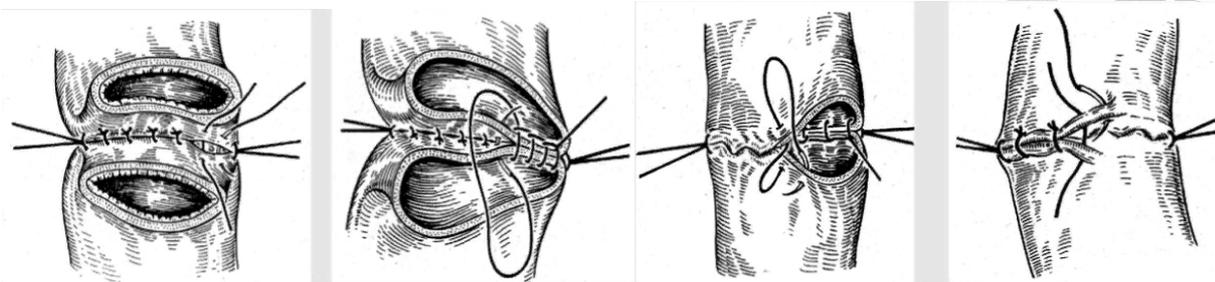
**The number of people in the team: 2**

**Time to complete: 60 minutes**

**Stages of operation:**

1. imposed intestinal soft clamps;
2. formation of double-row intestinal suture on back side;
3. formation of double-row intestinal suture on back side;

Approximate scheme of the small-intestinal anastomosis



Competition Evaluation Criteria		Scores
1. Quality	The presence of patency and the absence of a stricture is checked by holding a finger in the area of the anastomosis.	0-10-20
	The tightness of the intestinal suture is checked by inserting of clamp with one hand and filling of the intestine of the test fluid reservoir via drip infusion systems on the other hand intestine raised 1 meter above the region of the anastomosis. Inspection is carried out without pressure on the tank (if fluid leaks out or forms a jet, the skill is considered as <b>NOT passed!</b> )	0 to 20
	The absence of suture material in the intestinal lumen is checked by opening the intestine in the area of the superimposed anastomosis for an extra mucous row of sutures.	0-10-20
2.Speed	Points are subtracted from the increments of 5 points after the first team in time crews (first 4 commands get points )	20
3. Theory	Questions in writing after surgery	20
<b>Total:</b>		<b>100</b>



## 6. SKIN SUTURE

**Clinical case:** postoperative keloid scar

**The end result:** excision of the scar and plastic of the skin defect with local tissues according to A. Limberg

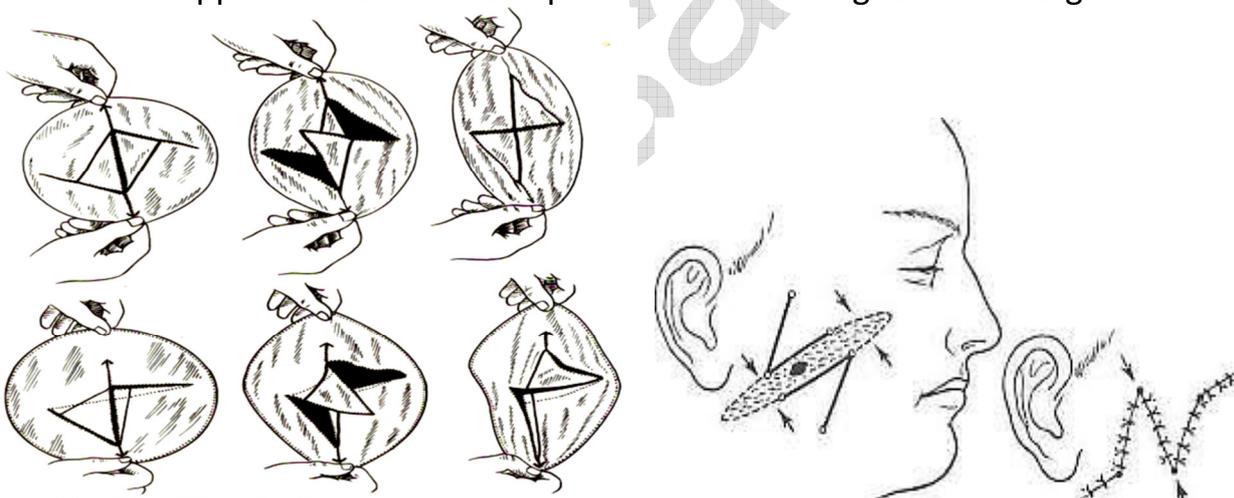
**The number of people in the team:** 2

**Lead time:** 60 minutes

**Stages of operation:**

1. planned the final drawing of the scar by drawing lines of subsequent cuts
2. sparingly keloid scar;
3. produced tissue mobilization by preparing the underlying tissues, drawing closer or diluting the wound edges with opening or closing the wound edges;
4. spent additional laxative skin incisions with subcutaneous fat;
5. brought closer positional patches of skin together with subcutaneous fatty tissue , matched them exactly in relation to each other;
6. imposed interrupted sutures on the wound without tension;

Approximate scheme of plastic skin according to A. Limberg



Competition Evaluation Criteria		Scores
1. Quality	A pre-planned pattern has led to an accurate mapping of patches.	0-10
	Achieved maximum comparison of the wound edges without the formation of cones, tension, and (if no matching patches and the presence of a residual defect of the wound, the skill is considered <b>NOT to have been passed!</b> )	0-20
2.Speed	Points are subtracted from the increments of 5 points after the first team in time crews (first 4 commands get points )	10



3. Theory	Questions in writing after surgery	10
<b>Total :</b>		<b>50</b>

## 7. KNOTS

**Clinical case:** the lights were turned off in the district hospital during the final stage of the operation, when the surgeon was left to tie up the skin suture knots.

**The final result:** Participant tied up the maximum number of sea knots with his eyes closed in 30 seconds (every participant is free to choose the method of tying knots).

**Number of participants:** 2

Competition Evaluation Criteria		Scores
1 <sup>st</sup> participant	≥40 knots – 10 points	10
2 <sup>nd</sup> participant	35-39 knots – 9 points	10
	30-34 knots – 8 points	
	25-29 knots – 7 points	
	20-24 knots – 6 points	
	15-19 knots – 5 points	
	10-14 knots – 4 points	
	5-9 knots – 3 points	
	0-4 knots – 2 points	
<b>Total:</b>	<b>Scores of both participants will be summed up</b>	<b>20</b>

## 8. SURGICAL INSTRUMENTS

**Clinical case:** the surgeon asked you to choose the necessary set of tools for him.

**End result:** each participant correctly named 5 tools.

**Number of participants:** 2

Competition Evaluation Criteria		Scores
1 <sup>st</sup> participant	1 tool - 3 points	15
2 <sup>nd</sup> participant	Tool name - 1 point	15
	Title by author - 1 point	
	Application - 1 point	
<b>Total:</b>	<b>Scores of both participants will be summed up</b>	<b>30</b>

*Note: For a list of tools, see Appendix 1*



## 9. INTRACOPORAL COORDINATION OF HANDS

**Clinical case:** laparoscopic relay

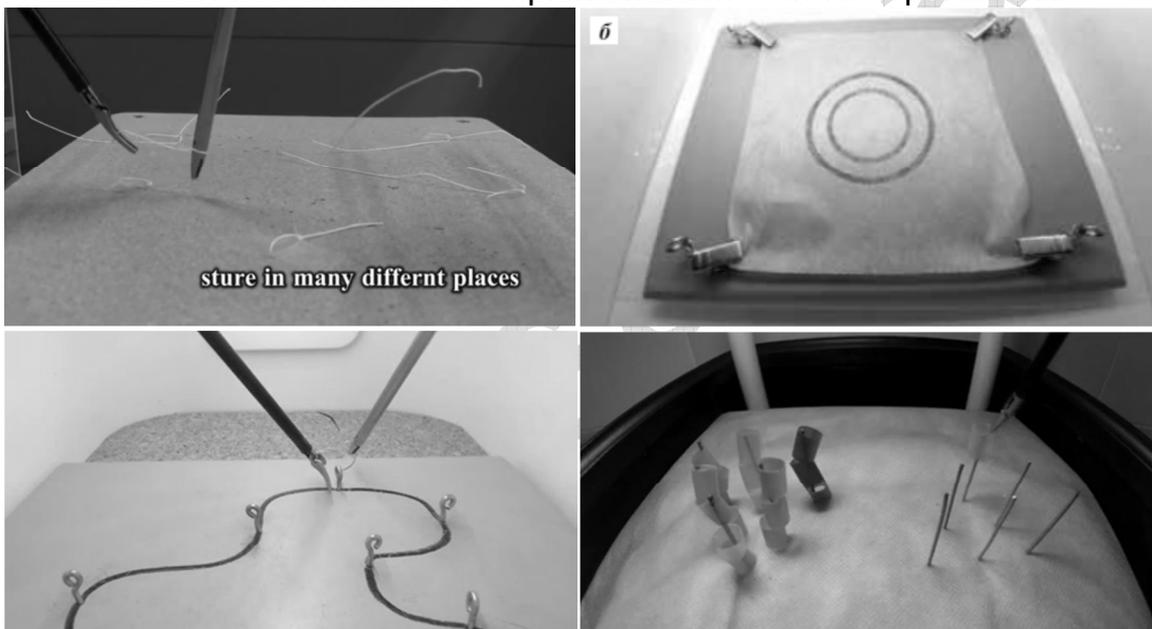
**Final result:** each participant completed his part of the relay .

**Number of participants:** 4

**Relay stages:**

1. Intracorporal knot tying;
2. Intracorporal circle cutting;
3. Threading a needle through a 3 mm round hole;
4. Shifting plastic couplings and transferring gum to other rods.

Indicative scheme for the implementation of intracorporeal skill



Competition Evaluation Criteria		Points
1 contestant	Tied 5 threads of 3 knots each. 1 thread - 4 points	20
2 contestant	– Cut a circle exactly along the contour – 20 points – Cut circle is not exactly on the contour – 10 points – Did not cut any circle – 0	20
3 contestant	The needle was threaded through 5 rod's eyes (4 circle clockwise). 1 ear - 1 point	20
4 contestant	Transferred 15 clutches and 1 gum from one rod to another.	20



	Fallen couplings are not counted ! 1 clutch - 1 point, 1 gum - 5 points	
Speed	Points are subtracted from the increments of 5 points after the first team in time crews (first 4 points get commands)	20
<b>Total:</b>		<b>100</b>

**Note:** The tools are provided by the organizers (endo clip of the type "Maryland", endo clip atraumatic - 2 pieces, Cooper's endoscopic scissors, endo-needleholder)

### 10. DIAGNOSTIC LAPAROSCOPIC REVISION OF UPPER FLOOR OF THE ABDOMINAL CAVITY ON A RABBIT ( high-fidelity level)

**Clinical case:** the patient (rabbit) was admitted with pain in the epigastric abdomen of unknown etiology, it was decided to perform a diagnostic laparoscopic revision of the upper floor of the abdominal cavity. The patient (rabbit) shaved, fixed, served on the operating table. Performed premedication and induction anesthesia. The equipment of the endoscopic stand is connected. Endoscopic instruments prepared. **The end result:** showed on the monitor of the endoscopic stand the organs of the upper floor of the abdominal cavity (liver, gallbladder, stomach, spleen)

**Number of participants:** 4

**Lead time:** 30 minutes for 1 team

Competition Evaluation Criteria		Points
1. Quality	The operating team prepared for the operation: Surgeon, assistant and operating nurse / nurse put on shoe covers, mask, cap, washed hands according to the rules, put on a disposable surgical suit and sterile gloves according to the rules ( <b>10 minutes</b> from the start of the skill)	0-10-20
	The anesthesiologist put on shoe covers, mask, cap and sterile gloves according to the rules, provided venous access, connected the system and a bottle of saline, collected a 5% syringe with 1% propofol emulsion ( <b>10 minutes</b> from the start of the skill)	0-10-20
	The surgeon correctly noted the places of introduction of trocars to access the organs of the upper floor of the abdominal cavity.	0-10
	The surgeon performed the classic processing and limitation of the surgical field (limit <b>15th minute</b> )	0-10



	The surgeon introduced 3 trocars without a Veress needle for a laparoscope (10 mm) and two instruments (5 mm), taking into account the anatomy of the rabbit anterior abdominal wall (limit <b>20th minute</b> )	10-20
	The surgeon provided the camera with access to the test organs (liver, gallbladder, stomach, spleen) without damaging the surrounding tissues.	20
	The assistant brought the camera to the organs, did not fill up the horizon, showed the investigated organs of the jury of the Olympiad ( <b>30th minute limit!!! - the end of the skill!!!!</b> )	20
	The anesthesiologist provided adequate anesthesia throughout the operation, using 1% propofol emulsion as a sleeping medicine and ketamine for pain relief.	0-20
	The operating nurse presented the surgical instruments, suture material and surgical underwear on time, in advance felt the course of the operation.	10
	The team completed the operation on time, removing the instruments and trocars from the abdominal cavity, suturing the puncture site and preparing the operating room for the next team and returning everything to its original state (time is not taken into account, the puncture is sutured on the adjacent operating table)	10
	The team showed well-coordinated teamwork, good communication skills and professionalism.	10
2. Speed	All stages of the operation were completed at a certain time set by the Organizing Committee of the Olympiad. Points are taken away in increments of 5 points after the first brigade in time (points receive the first 6 teams)	30
<b>Total:</b>		<b>200</b>

**Note:** Instruments (trocars 5 mm - 2 pieces, 10 mm - 1 piece, laparoscope 10 mm - 1 piece, 10 mm five-petal retractor, 5 mm anatomical endo-clamp; classical instruments, needles and suture material for suturing puncture sites) and a laparoscopic stand are provided by the organizers. The preoperative operating unit is equipped with sinks and antiseptic solutions.

## 11. EMERGENCY ASSISTANCE

**Clinical case:** You are a military doctor on the battlefield. Ordinary soldier received a gunshot wound that stung the main artery, however, could not stop the bleeding in the wound. It was decided to ligate the trunk arteries throughout. The emergency care skill begins immediately after the code word: " Doctor, I'm injured! Help me! "



**End result:** Correctly banded the main artery over.

**Number of participants:** All team

**Lead time:** 15 minutes

Competition Evaluation Criteria		Points
1. Quality	Correctly determined the level of ligation of the main artery	0-20
	I applied a ligature, used the correct knot, did not sew the surrounding tissues (if this step is not performed, the skill is considered <b>NOT to be passed!</b> )	0 to 20
2. Speed	Stopped bleeding within 5 minutes	0-10
<b>Total:</b>		<b>50</b>

**Note :** A standardized patient is provided, the skill can start anytime, anywhere.

## 12. SURGICAL CASE

You are a doctor at the Research Institute of Surgery. Your attention is given the clinical situation of the patient with a surgical disease. Make a diagnosis .

You will be given 10 questions, in order from the most difficult to the simple. Each subsequent question will simplify the diagnosis, but at the same time the issue price will fall.

The team can pass an evaluation sheet with a recorded diagnosis at any stage of the level of complexity of the question, however, the more complex and expensive the question is, the greater the risk of mistaking the correct diagnosis due to the lack of information about the disease.

Question number	Level of difficulty	Price in points
1.	Complaints	100
2.	Anamnesis of life	90
3.	Medical history of the disease	80
4.	Physical data	70
5.	Special clinical tests and tests	60
6.	General laboratory tests	50
7.	Special laboratory tests	40
8.	Screening methods of visual diagnostics (mammography, fluorography, etc.)	30
9.	Special methods of visual diagnostics (ultrasound,	20



	CT, MRI, PET, X-ray, etc.)	
<b>10.</b>	Morphological picture	<b>10</b>

**Note:** The Organizing Committee has the right to change the order of levels of complexity of issues at its discretion.

## Appendix 1

### List of surgical instruments

#### I International Olympiad

#### CAOS Almaty -2019

1. Brain's Knife Virchow
2. Large Liston amputation knife
3. Small Liston amputation knife
4. Scalpel (the knife) abdominal all-metal
5. Scalpel (the knife) is peaked all-metal
6. Scalpel (the knife) with a removable blade
7. Trocar with stiletto (Bulau)
8. Pointed scissors in cavity
9. Blunt scissors in cavity
10. Curved Mayo scissors
11. Scissors (Metzenbaum)
12. Scissors (Lister)
13. Pointed scissors
14. Blunt scissors
15. Dissecting blade saw
16. Bone spoon of Bruns
17. Spoon for maxillary sinuses
18. Trapezoid gouge chisel
19. Curved rib raspator (of the Doyen)
20. Rib raspator (of the Doyen)
21. Straight raspator (of the Farabeuf)
22. Bent raspator (of the Farabeuf)
23. Neurosurgical cutting forceps with elongated handles
24. Curved rib resections (of the Stille Gierts)
25. Egorov-Freiding Pliers
26. Stille-Gierts straight rib shears
27. Spinal puncture needle with mandrin
28. Bone clippers (of the Liston)
29. Bone clippers curved (of the Jansen)
30. Bone clippers (of the Luer)
31. Cranial nippers (of the Dahlgren)
32. Knife saw
33. Frame saw blade
34. Frame saw rectangular
35. Gigli saw wire with Olivecron handles
36. Guide for Gigli saw wire
37. Gypsum bandages saw (Bergman)
38. Hand drill
39. Trepanning cutters
40. Trephine/brace
41. Curved clamp (Mikulicz)
42. Needle holder (Mathieu)
43. Curved clamp (Kocher)
44. Straight clamp (Kocher)
45. Aortic clamp (Satinsky)
46. Curved clamp (Billroth)
47. Fedorov clamp
48. Straight clamp (Billroth)
49. Curved Mosquito clamp (Halsted)
50. Allis clamp
51. Mouth gag (Colin's gag)
52. Clamp (Pean's Clamp)
53. Atraumatic needles
54. Conventional needles (free; traumatic needles)
55. Luer's Tracheostomy Cannula
56. Trousseau's trachea dilator
57. Intestinal Clamp, curved
58. Intestinal Clamp crushing
59. Tracheostomy hook sharp chassignac
60. Intestinal Clamp with variable stiffness
61. Hoepfner's Elastic clamp for vessels
62. Bullet forceps
63. Tibial pin for osteosynthesis



64. Clamp from the Hoodov's apparatus for stitching vessels
65. Instrument for the imposition of purgative sutures on the duodenum
66. Payer's clamp
67. Endotracheal tube
68. Sivash's Endoprosthesis
69. Lane's plate
70. Polyakov's Plate
71. Esmarch's inhaler (mask)
72. Hemorrhoidal forceps fenestrated
73. Towel clips ( for operating linen)
74. Corrugated artificial vascular prosthesis
75. Bone rongeurs with quadrangular gap (Collin)
76. Uterine elastic clamp with chest lock
77. Tough grooved probe
78. Angular retractor
79. Surgical hammer
80. Farabeuf's retractor (lamellar, double-sided) large, 22 cm
81. Farabeuf's retractor (lamellar, double-sided) small, 16 cm
82. Duval's fenestrated forceps
83. Metallic urethral catheter (female curved)
84. Benecke metallic urethral bougie (male curved)
85. Roser's Metallic Urethral Bougie
86. Double-ended bulbous-end probe
87. Nelaton's grooved director probe
88. Luer's Clamp
89. Guyonu-Sinitsyn urethral bougie
90. Heywood-Smith's clamp, straight
91. Collin's tongue forceps
92. Collin's Clamp fenestrated
93. Backhaus towel clip
94. Russian forceps (medium) 180mm
95. Dura forceps
96. Kocher probe (ligature guide)
97. Russian forceps (large) 200 mm
98. Doyen's Costal Raspator, for children
99. Doyen's Costal Raspator, for adults
100. Israel's Four-toothed retractor (blunt)
101. Volkmann's retractor, four-toothed (blunt)
102. Volkmann's retractor, three-toothed (spiky)
103. Volkmann's retractor, two teeth
104. Rat-toothed Chasseus's retractor (sharp)
105. Kocher-Langenbeck wound single hook retractor
106. Putty knife (spatula)
107. Brain spatula (synonym: neurosurgical spatula)
108. Buyalsky's retractor
109. Langenbeck's Elevator
110. Adson-Brown forceps, microsurgical
111. Gross-Mayer clamp straight
112. Gross-Mayer clamp curved
113. Shor's forceps
114. Dura forceps (small) 150 mm
115. Dura forceps (medium) 180mm
116. Dura forceps (large) 200 mm
117. Russian forceps
118. Subbotin's Rectal Speculum(adults)
119. Rectal Speculum (children)
120. Cuscou's Vaginal speculum , bivalved
121. Gossett's abdominal retractor
122. Collin's retractor
123. Mikulich's retractor
124. Fedorov's renal speculum
125. Reverden's retractor
126. Fritch Doyen's saddle abdominal speculum
127. Mikulich's Speculum,
128. Hosel's speculum
129. Doyen's Vaginal speculum
130. Doyen's Vaginal speculum , small
131. "Saddle" retractor,
132. Speculum for abdominal wall 100 mm long
133. Richardson's Double-sided mirror (for pulmonary surgery)
134. Heigt Small Screw Retractor for Thoracic Cavity
135. Finochietto Screw Retractor for Chest Cavity
136. Retractor for the chest cavity (with the consumption of mirrors)



Asfendiyarov Kazakh National Medical University



### **The welcome CARD**

The welcome card involves the creation of a 3-4 minute video about the team for publishing on youtube - the CAOS channel (date of publication – 1<sup>st</sup> March) and preparing a 4 minute performance in the form of a sketch on the theme of the Olympics. The Best Welcome Card is awarded with a separate Diploma. Welcome cards are not rated on the team's overall score.

**Venue:** Republic of Kazakhstan, Almaty, st. Tole bi, 94, Asfendiyarov Kazakh National Medical University

**You must confirm participation before February 1, 2019 using the Google form at <https://goo.gl/forms/9YWu4Zs77cxrfW5k2>**

**For all questions please contact the Organizing Committee:**

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