

## Program of the International Student Olympiad on Surgery

№	Time	Event (location)				
<b>23.04.2020</b>						
1	8.00-8.50	<b>Team registration</b> Ufa, 51 Karla Marksa Street. Hall				
2	9.00-9.45	<b>Opening of the Olympiad. Welcome speech. Teams presentation. Voting.</b> Conference-hall (the 2 <sup>nd</sup> floor)				
<b>Competitions</b>						
3	10.00-11.45	<b>Coronary artery bypass grafting (2-3)</b>	10.00-11.00	<b>Theoretical competition (test) (captains of the teams - 1)</b>	10.00-12.00	<b>Intubation trachea + Cardiopulmonary resuscitation (2-3)</b>
4	12.00-14.00	<b>Operation by Studer (2-3)</b>	11.00-13.30	<b>Anatomical competition (2 - participants)</b>		
<b>14.00 -15.00</b>		<b>Break</b>				
5	15.00-17.00	<b>Gasterctomy (2-3)</b>	<b>15.00-16.00</b>	<b>Nephrectomy (Lapsim) (1)</b>	15.00-17.00	<b>Case study (2)</b>
6			<b>16.00-17.00</b>	<b>Simulator laparoscopic appendectomy (2)</b>		
<b>24.04.2020</b>						
7	9.00-10.00	<b>Photo-video-competition (2)</b>	9.00-12.00	<b>Laparoscopic surgery on piglets - suturing of a Stomach wound ("perforated ulcer") (2-3)</b>		
12.20-13.00		<b>Break. Scoring</b>				
8	13.00-15.00	<b>Laparoscopic surgery on piglets – hernioplasty (6 teams will participate) (2-3)</b>				
15.00-15.30		<b>Break. Scoring</b>				

9	15.30- 17.00	<b>Laparoscopic surgery on piglets – cholecystectomy</b> (3 teams that receive maximum number of points will participate) (2-3)
	17.00- 18.00	<b>Break</b>
1 0.	18.00	<b>Concert. Summary. Awarding. Closing of the Olympiad</b> ( Conference-hall)

**Contest tasks  
of the International Student Olympiad on Surgery  
The list of contests of the Olympiad:**

1. Theoretical contest (test);
2. Photo – video- competition;
3. Ileocystoplasty by Studer;
4. Coronary Artery Bypass Grafting (CABG);
5. Gastrectomy;
6. Case study;
7. Endo-video-competition – appendectomy (on gloves);
8. Intubation trachea;
9. Cardio-pulmonary reanimation;
10. Anatomic course;
11. Nephrectomy (Lapsim);
12. Laparoscopic cholecystectomy;
13. Laparoscopic hernioplasty;
14. Laparoscopic operation – wound suturing of the stomach.

Operations will be performed using porcine organs and pigs weighting 20-25 kg. Each team brings its own suture materials and instruments according to the requirements for each competition.

All surgical interventions on animals will be carried out in compliance with the rules of humane animal treatment in accordance with both order № 755 of the Ministry of Health of the USSR of 12.08.1977 "On measures to further improve the organization of work using experimental animals" and order № 701 of 07.27.1978 "On introduction the additions to the order № 755 of the Ministry of Health of the USSR of August 12, 1977" as well as in accordance with the Helsinki Declaration of 2000.

## **1. THEORETICAL CONTEST**

**Task.** The competition is held in the format of testing. Participants need to choose one correct answer to each question presented on the screen.

**Contest organization.** Each participant (team leader) goes to the computer room and gets an answer form with 30 empty fields. The screen displays questions without an answer for all teams at the same time. Each question is read aloud by a representative of the Organizing Committee, and then 25 seconds are given for cogitation and writing an answer in the form. At the end of the competition, the forms will be collected by the organizers for evaluation by the jury members.

**Evaluation of the competition.** Each correct answer brings 0.5 point to a team. The maximum number of points - 15. With the number of points:

- 12 or more - 3 points are given to a team;
- from 9 to 11 – 1.5 points are given to a team;
- from 6 to 8 - 1 point is given to a team.

The final ranking of teams in the competition will be made by the number of points for correct answers.

## **2. PHOTO-VIDEO-COMPETITION**

**Competition requirements:** Competition will be held as a quiz. After looking at a picture on a screen teams have to put down correct answer to a special sheet.

**Organization of competition:** Each team consisting of 2 people gets an answer sheet with 20 empty fields to fill in. During competition there will be 20 different endoscopic images of organs of abdominal and thoracic cavities on the screen. Each image will be accompanied by a question. After every question teams will have 30 sec for writing correct answer down. At the end of the competition the organizers will collect all the sheets from the teams for evaluation by jury members.

**Evaluation of results:** Every correct answer brings 0,5 point to a team. Maximum score for the competition is 15 points.

If a team gets  $\geq 9$  points in the competition total team score gets 5 more points;

If a team gets 6-8 points in the competition total team score gets 3 more points;

If a team gets 3-5 points in the competition total team score gets 2 more points;

Team ranking in the competition will depend on points received for correct answers.

Competition topics:

- Endoscopic view of abdominal cavity organs

- Endoscopic view of thoracic cavity organs.

If you have any questions and concerns regarding the competition, feel free to contact Ruslan Garifullin +7-927-083-44-25 or <https://vk.com/renatelli>.

### 3. ILEOCYSTEPLASTY BY STUDER

Patient S., 60 years old with progressive malignant tumor growth, underwent radical resection of the bladder. No distant metastases were detected. Surgeons decided to form an orthotopic urinary reservoir. It is necessary to form a spherical reservoir from the ileum segment 55-60 cm long on the feeding leg, after the intestinal loops are detubulated. First, the isolated intestinal segment is sutured with continuous serous - muscle sutures with synthetic absorbable sutures. (vikril 4 \ 0). The distal part of the ileo-intestinal segment is cut along the mesenteric edge for 40 cm. The opened part of the segment is U-shaped, folded, the adjacent edges of both knees are sutured with one row of continuous serous-muscular sutures. The lower part of the obtained U-shaped segment is folded transversely upward. Before stitching the free edges of the opened segment, the ureteric catheters are inserted into the ileum leading to the ileum, the ends of which are discharged through the wall of the reservoir. Anastomoses are formed between the ureters and the crossed adducting part of the segment. The formation of anastomosis with urethra is not provided for in this competition.

Biomaterial will be provided for the competition: pig's small intestine 60-70 cm. Ureters (2) The organs will be located on a foam plastic substrate. The number of people in the team is 2-3 (operator, assistant, operating department assistant). Tools and suture material must be carried with you.



Рис. Methods of forming of ileocystoplasty by Studer

Evaluation Criteria	Number of points	Note
Hermetically sealed of the anastomosis (reservoir)	4 points – sealed anastomosis 1 point – diffuse drip seepage 0 point – stream leakage from the <u>suture line</u>	
Aesthetics	1 point – similar spacing between stitches, similar directions of stitches, equable tightening of stitches; 1 point – different intervals between stitches, similar directions of stitches, irregular tightening of stitches; 0 point - different intervals between stitches, different directions of stitches, irregular tightening of stitches;	
Lack of suture in the intestinal lumen	2 points – absence of the suture material in the bowel lumen; 1 point – cutting out of the suture material ( no more than 2); 0 points – cutting out of the suture material (more than 2).	
Patency	2 points – anastomosis is passed; 0 point– anastomosis isn't passed.	
The volume of reservoir	3 points -150 ml and more; 1 point -90-150 ml; 0 point – less than 90 ml.	
<b>Urethronocystoanastomosis</b>		
Hermetically sealed of the anastomosis	2 points – suture is hermetically sealed; 0 point – suture isn't hermetically sealed.	
Patency	3 points – anastomosis is fully passed; 0 point - anastomosis isn't fully passed.	
The time of competition	1 point – less than 90 min. 2 points- 90-110 min; 0 point – more than 110 min. Completion of the competition	
Theoretical	2 points –3 right answers;	

questions	2 points – 2 right answers; 1 point – 1 right answer.	
Total (max. point)	28 points	

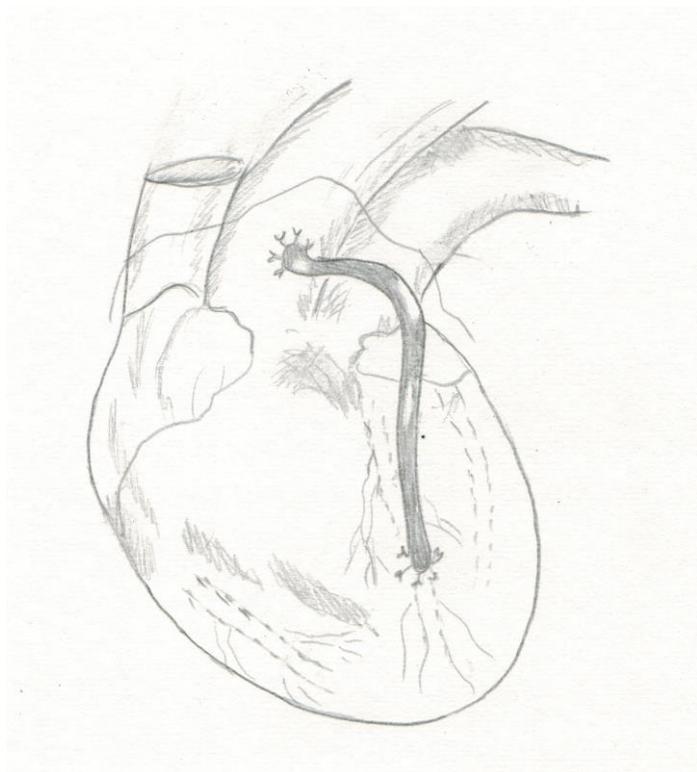
If you have any questions and concerns regarding the competition, feel free to contact Kalanov Bulat, tel. +7 987 0 920 888

#### 4. CORONARY ARTERY BYPASS GRAFTING

##### Target:

A team must perform coronary artery bypass grafting by autovenous transplant on Ramus Interventricularis Anterior (RIVA) on porcine heart.

*Modeled clinical situation:* surgical treatment of coronary heart disease in the middle part of Ramus Interventricularis Anterior (RIVA); aorto-coronary bypass



##### Tasks:

1. To make aortocoronary bypass between aorta and middle part on IVA with venous transplant.

Suture material: polypropylene suture 6/0 -7/0 – 1, polypropylene suture 8/0 – 1.

Evaluation criteria	Number of points
Suture esthetics (equal steps, directions of stiches, absence of cross-sections)	2 points – all the requirements are fulfilled; 1 point – different spaces between stiches, 0 point – different directions of stiches, not irregular step, general view anastomosis failure
Suture hermeticity	4 points – all the requirements are fulfilled (hermetic anastomosis, with diffuse leakage no more then 1/3 suture line), 3 points - diffuse permeation on anastomosis perimeter, 2 points – leaking of fluid from 1 injection, 1 point – leaking of fluid from 2 injections, 0 point – by incontinent (fast fluid leaking, fluid leaking from 3 or more injections)
Absence of slaking and cross-sectioning suture material in vessel lumen	2 points – no slaking, no cross-section; 1 point– slaking or cross-section of no more than in 2 stitches; 0 point – more than 2 sutures are slaking
Absence of anastomosis stenosis	2 points– insufficient square of anasthomosis 1 point – insufficient square of anastomosis 0 point – full anasthomosis
Absence of vessel intima cutting	1 point – absence of intima cutting 0 point – intima cutting
Theoretical background	(each team should answer 3 questions). For each question 1 point; incomplete answer - 0,5 points; wrong answer - 0 points
Coordinated team work	0-1
Proper instruments usage	0-1
Time of competition	2*
Total (maximal number of points)	18

\*Teams who complete all the tasks in time get 2 points, rest teams - 0 points.

Competition time – 60 min.

Number of members of team in brigade: 2-3.

If you have any questions and concerns regarding the competition, feel free to contact Garifullin Ruslan, tel. +7 927 083 44 25

## 5. GASTRECTOMY

**Task:** Patient of 62 years old, gastroscopy revealed a “saucer-shaped” tumor in the middle third of the stomach with a slight curvature of 7x8 cm. Surgeons decided to conduct a gastrectomy with the formation of esophagojunioanastomosis according to Roux.

**Competition requirements:** to mobilize the stomach along the greater and lesser

curvature. Bandage visible vessels. Cut off the stomach from duodenum. Of the intestine and form a stump of duodenum. The method of forming duodenum by the team is chosen independently with justification. Gastrectomy is performed with resection of the adjacent part of the abdominal esophagus. (1-2 cm from cardiac squeezing). Restore the continuity of the gastrointestinal tract (Fig. 7).



Fig. 7 Esophagojejunostomy by Roux

It will be provided with swine stomach with esophagus and duodenum. Each team brings instruments and suture material (vicryl 4\0). The quantity of the participants is -2-3. The time of performing - 90 min.

**The assessment consists of the following criteria:**

	Evaluation Criteria	Number of points
1	Hermeticity of the esophagojejunostomosis (it is checked by filling the stomach with stained water through the esophagus)	4 points – sealed anastomosis 2 points – diffuse drip seepage; 0 point – stream leakage from the <u>suture line</u> .
2	Aesthetics	3 points – similar spacing between stitches, similar directions of stitches, equable tightening of stitches; 2 points – similar intervals between stitches, different directions of stitches, irregular tightening of stitches; 1 point - different intervals between stitches, similar directions of stitches, irregular tightening of stitches; 0 point – different intervals between stitches, different directions of stitches, irregular tightening of stitches;

3	Lack of suture in the bowel lumen ( <u>one-row suture</u> )	3 points – lack of sutural material in the bowel; 1 point – cutting down of the sutural material (no more than 2 sutures); 0 point – cutting down of the sutural material (more than 2)
4	Passing of the anastomosis	3 points – anastomosis is passed; 0 point anastomosis isn't passed.
<b>Processing of the duodenum</b>		
5	Hermeticity	4 points- the stump is sealed; 0 point – the stump isn't sealed.
6	Aesthetics	2 points – regular stitches of suture; 0 point- <u>nonadherence</u> of criteria.
<b><u>Interintestinal anastomosis (end-to-side)</u></b>		
7	Hermeticity of the anastomosis	4 points – sealing of the anastomosis, 2 point – diffuse drip seepage; 0 point – – stream leakage from the <u>suture line</u> .
8	Aesthetics	3 points – similar spacing between stitches, similar directions of stitches, equable tightening of stitches; 2 points – similar intervals between stitches, different directions of stitches, irregular tightening of stitches; 1 point - different intervals between stitches, similar directions of stitches, irregular tightening of stitches; 0 point – different intervals between stitches, different directions of stitches, irregular tightening of stitches;
9	Anastomosis patency	4 points –anastomosis is passed; 2 points- <u>luminal narrowing</u> of the anastomosis 0 point anastomosis isn't passed.
10	Time of competition	5 points – less the 70 min; 2 points -70-90 min; 0 point –more than 90 min More than 100 min – completion of the competition.
	Well coordinated work of the teams, correct work with instruments	3 points- correct work with instruments, adequate assistance; 0 point- incorrect work with

		instruments, inadequate assistance;
1 1	Theoretical questions	4 points -3 right answers; 2 points -2 right answers; 1 point -1 right answer.
	Total	

If you have any questions and concerns regarding the competition, feel free to contact Rodion tel. +7 987 49 64 669

## 6. CASE STUDY

**Task:** The clinical situation will be simulated by the resident (artist). It is necessary to collect complaints correctly, a medical history, highlight the main syndromes and symptoms of the disease, make a preliminary diagnosis, prescribe the necessary examination methods. Establish a final clinical diagnosis. Assign a detailed treatment plan.

**Time:** 12 minutes (2 minutes from the whole time –answer to the questions)

**Amount of participants:** 2

**Conditions of the competition:**

**Theme:** - «Acute abdomen», it is necessary to carry out diagnostics and differential diagnosis of this condition, to prescribe treatment. Three clinical cases with varying degrees of complexity will be considered. Accordingly, depending on the complexity, additional points will be added. The most difficult task - +6 points are added to the received points; average difficulty + 3 points; easy task + 0 points.

After the drawn lot, the participants receive a patient that imitates a particular disease. The team's task is to correctly collect an anamnesis, make a preliminary diagnosis, prescribe additional diagnostic methods (if the prescribed methods are relevant for this clinical case, the results of the examination are given) and prescribe a detailed treatment plan (both conservative and operational methods - the name and course of the operation).

In the course of solving a clinical case, the jury asks the necessary additional questions to the participants to assess general knowledge in the field of surgery (3 questions).

Preliminary diagnosis	3 points - a correct preliminary diagnosis was made, a full differential diagnosis was made 1 point - the diagnosis is incorrect, but the differential diagnosis is carried out fully
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<u>Compatibility with patients</u>	<p>3 points - a trusting relationship with the patient is established, the history is correctly and fully collected, the main symptoms and syndromes are highlighted</p> <p>1 point - the participants established a trusting relationship with the patient, the main symptoms and syndromes were highlighted, but the anamnesis was not collected correctly,</p> <p>trusting relationships with the patient were established, the medical history was correctly and fully collected, but the main syndromes and symptoms were not identified</p> <p>0 point - participants did not establish a good contact with the patient, the anamnesis was not collected correctly, the main symptoms and syndromes were not revealed</p>
The optimal purpose of additional examination methods	<p>2 points - appointments are justified to exclude or confirm the diagnosis, the survey results provided are interpreted correctly</p> <p>1 point - additional examination methods are justified, but interpreted incorrectly</p> <p>0 point - additional examination methods were not assigned or the appointment is incorrect in this clinical situation</p>
Treatment policy	<p>3 points - the most optimal tactics was selected, the course of treatment was explained in detail, there were no big factual errors</p> <p>1 point - the optimal tactic was chosen, but the participant could not explain the course of treatment</p> <p>0 point - wrong treatment assigned</p>
Answers to the jury's questions	<p>4 points - answers to all questions of the jury are detailed and correct, there are no actual errors or inaccuracies;</p> <p>3 points - full answers are given, but not all questions; the answers to all questions were incomplete, but there were no big factual errors or inaccuracies</p> <p>0 points - there were no answers to 1 question of the jury; all answers were incomplete or contained gross errors</p>
<b>TOTAL</b>	<b>14 points (+6 or +3 points)</b>

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## **6. ENDO-VIDEO-COMPETITION- APPENDECTOMY (ON A GLOVE)**

**Task:** Put 3 Roder loops on the finger of the latex glove filled with water and cross the finger between the ligatures.

Participants will be offered a latex-filled glove filled with water. The goal is to sequentially put 3 ligatures on one of the fingers of the glove (chosen by the participants), and then cross the finger between the ligatures. You do not need to remove your finger from the box simulator.

Time: 15 minutes.

Recommended set of tools:

1. Dissector
2. Knot pusher (толкатель) - for knot tightening (it is fine to use the second dissector)
3. Microscopic scissors

The teams bring their own tools.

**Criteria:** 1). Hermeticity of a glove (evaluated by the jury immediately after the assignment is completed): failure of the applied ligatures, lack of tightness - 0 points; drip leakage of liquid - 3 points; the glove is tight - 5 points 2). Hermeticity of a finger (evaluated by the jury immediately after the assignment): failure of the ligature imposed, lack of the hermeticity - 0 points; drip leakage of liquid - 3 points; finger tight - 4 points; 3) The accuracy of manipulations (assessing the possession of manual skills in endoscopic surgery - the technique of owning tools, the absence of unnecessary movements, etc.) - from 0 to 3 points; 4). Theoretical training (theoretical knowledge of team members on laparoscopic surgery is assessed. 3 questions will be asked. The correct answer is 1 point; The misleading answer is 0.5 points; The incomplete answer is 0 points) - from 0 to 3 points.

The maximum number of points for a task is 15. If a team member does not fit into the allotted time, the total amount of points for a task is 0.

If you have any questions and concerns regarding the competition, feel free to contact Garifullin Ruslan, tel. 8-927-083-44-25

Teams that have got the same number of points are evaluated by the amount of time each participant spent on his task.

## 7. INTUBATION TRACHEA

**Task:** to provide laryngotracheal intubation on simulator.

Evaluation criteria	Number of points
Time (not more than 25 seconds)	1
Correct intubation (the tube should run smoothly, without reaching the stomach, both lungs should be evenly ventilated)	0-1-2
No traumatization of oral cavity should occur (red signal on simulator is an indicator of traumatization or decision of judges )	0-1-2
Total:	5

If tube penetrates the stomach, total points for competition is 0 points!

Persons, who will get 5 points for this competition and complete this task spending least amount of time will get Diplomas of I, II and III grades. If all 5 teams get 5 points for competition, 3 fastest of them will get Diplomas.

In this competition 2 persons can take part.

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## 8. CARDIOPULMONARY RESUSCITATION

In this competition 2 persons can take part. Evaluated skill: providing emergency aid (first aid).

**Competition conditions:** providing basic cardiopulmonary resuscitation using automated external defibrillator to an injured person

**Clinical case:** A man, an electrician of 35 years, got electric shock during work. He is unconscious, without breath, the state of clinical death.

During cardiopulmonary resuscitation defibrillator appears to be non-working. Participants are to make a correct decision in time.

For every participant there is a special check-list where jury can evaluate definite vital signs, thorax compression, artificial ventilation providing e.t.c. The highest score for the competition is 14 points.

Recommended reading: V. V. Moroz , Recommendations for resuscitation activities of the European Resuscitation Council (revision 2015).

If you have any questions and concerns regarding the competition, feel free to contact Sabirzyanov Sabir, tel. 8 967 458 13 48

## 9. ANATOMICAL COMPETITION

### Anatomical simulator of 3D visualization (Virtumed)



Two participants are to give correct answers for 10 cases with the use of anatomical simulator «YCom W».

Each right answer gives 1 point, incomplete answer - 0,5 point, wrong answer-0 points.

Examples of cases:

1. Patient has a heavy bleeding of deep face wound (maxillary artery is damaged), it is a reason for ligation of external carotid artery. You are to show the place of ligation of external carotid artery.

(Correct answer: external carotid artery is ligated for 1 cm higher of carotid bifurcation, higher of the level of arteria thyroidea superior.

2. Patient has a pyogenic cellulitis of parotid-masseteric region. During the ligation of pyogenic cellulitis, ramus of facial nerve was damaged. That is why risus sardonicus occurred. You are to show and name a damaged nerve. (Correct answer: marginal mandibular branch of facial nerve)

3. Patient has an abscess in rectouterine space. Five days before an appendectomy was performed.

It was decided to puncture an abscess through vaginal opening.

You are to show the place of rectouterine space.

(Correct answer: posterior vaginal vault).

If you have any questions and concerns regarding the competition, feel free to contact Sabirzyanov Sabir, tel. +7 967 458 13 48

## 10. LAPSIM

### LapSim Nephrectomy

In this competition you are to perform nephrectomy with a LapSim virtual simulator.

#### **Competition conditions:**

Competition lasts for 7 minutes. Two persons can take part. A kidney will be separated of paranephric issue and represented on the monitor in 3D-format.

#### **Operative procedure:**

1) Step one: clipping of renal artery and its resection.

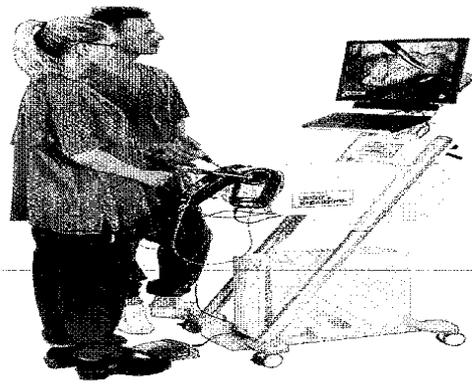
2) Step two: clipping of renal and testicular veins, further resection of them

3) Step three: clipping and resection of renal duct.

#### **Contest Criteria:**

Total time, path length of left/right appliance, angle of left/right appliance, left/right appliance out of sight, loss of clamps, quality of ligation, blood loss and so on.

Contest Criteria are calculated automatically by the operating system of simulator.



## 1 STAGE

### 12. ENDOVIDEO SURGICAL COMPETITION - LAPAROSCOPIC STOMACH ULCER SUTURING



It is required to perform a suture plication with the use of manual intracorporeal suturing technique on a pig ( a 2 cm wound will be inflicted by judges on anterior wall of stomach). Type of suture - double row ("through + serous-muscular").

The captain of the team and his assistant take part in this competition. Instruments and a suture material should be brought. Suture material – vicryl 3, 0 (taper needle ½ 22- 26 )

Evaluation criteria	Number of points
Suture hermeticity	5 points – consistent suture; 2 points - diffuse drip infiltration; 0 points - jet leakage from the suture line

Aesthetics	<p>4 points - equal spacing between sutures, same suture direction, uniform suture tightening;</p> <p>3 points - equal spacing between sutures, different suture direction, uneven suture tightening;</p> <p>1 point - different spacing between sutures, same suture direction, uneven suture tightening;</p> <p>0 point- different spacing between sutures, different suture direction, uneven suture tightening.</p>
Correct instrumental work (well coordinated work of the team, correct camera assistance, safety)	<p>3 points - good assistance, safely use of instruments, nicety with tissues, correct to advance, tool efficiency</p> <p>2 points - minor irregularities in the manipulation of instruments and camera;</p> <p>1 point - significant violations while working with tools and the camera, tissue injury;</p> <p>0 point - Noncompliance criteria. Rough safety violation.</p>
Time	<p>20 min - 5 points;</p> <p>25 min - 3 points;</p> <p>30 min - 2 points;</p> <p>More than 35 min - 0 points.</p>
Total	17 points

If you have any questions and concerns regarding the competition, feel free to contact Sabirzyanov Sabir, tel. 8 967 458 13 48

## 2 STAGE

### 13. ENDO-VIDEO SURGICAL COMPETITION – LAPAROSCOPIC HERNIOPLASTY

Stages of laparoscopic hernioplasty of inguinal prolapse in a pig:

1. Cut out the correct peritoneal flap according to its size and peritoneal flap by dissecting the preperitoneal space for free placement of the implant.
2. The size of the prosthetic mesh should be sufficient to cover all possible exit points of the hernias of the operated area.
3. Correct position the mesh in the inguinal region, proceed to fix it
4. When applying brackets, it is necessary to take into account the anatomy of the “inguinal” canal and the passage of the main vessels and nerves.

Evaluation criteria	Number of points
Fulfilling of the stages of the operation	Sequential performing of the stages 1-5 stages - 5 points; <u>Non-performance</u> of 1 stage -3 points; <u>Non-performance</u> of 2 stages -1 point; <u>Non-performance</u> of all stages - 0 point.
Absence of damages - surrounding tissues, organs and bleeding	No damages of organs and tissues ; no signs of bleeding -5 points; - There are insignificant damages that do not require additional action; minimal blood loss up to 30 ml - 4 points; There are damage to organs and tissues that have changed the course of the operation, bleeding, requiring surgical hemostasis – 3 points. Gross damage requiring external assistance or termination of the operation - 0 point.
Overlay staples to fix the mesh and close the peritoneal defect	Correct localization of staples and intracorporeal suture – 5 points; Correct localization of staples and imposition of an intracorporeal suture with defects no more 1-2 cm - 4 points; Correct localization of staples and the application of an intracorporeal suture with defects more 2 cm - 2 points;
Well-coordinated team work (conflict operating)	Well-coordinated work without complaints -3 points; Work with single notification -2 points;

	Conflict of the brigade members -1 point; Conflict of the brigade members and with the jury - 0 point
Aesthetics	Clean work with instruments -2 points; Single blots -1 point; Incorrect work of a brigade -0 point. Incorrect work of a brigade -0 point.
Work instruments (conflicts of instruments )	Good work with instruments -3 points; Rare mistakes -1 point; Conflicts of instruments -0 point.
Theoretical training (3 questions will be asked for every team)	Right answer -1 point; Incomplete answer -0,5 балла; No answer -0 point.
Time of the performing of the hernioplasty	In 30 min -6 points; In 35 min – 4 points; In 40 min -3 points; In 45 min-1 points; In 50 min-0 point; More than 60 min – completion of the competition.
Maximum number of points	29 points

5. Peritoneum closure - continuous suture.

### 3 STAGE

## 14. ENDO-VIDEO SURGICAL COMPETITION- LAPAROSCOPIC CHOLECYSTECTOMY

«from the cervix»

This competition will be held to identify the winner of the Olympiad and prize-winners, in cases, where the number of scored points is the same, the time of performing will be relevant. In the competition 3 teams will participate.

Operative procedure includes 5 sequential stages:

1. Installation of trocars: 1 – in the area of umbilicus, 2 trocars in the areas of hypochondrium, the 4<sup>th</sup> in the mesogastric area (all will be set by the members of jury).

2. After the capture of the gall bladder in the bottom area and in the cervix area. Gall bladder duct and bladder artery could be found.

3. The duct and artery are detached (**Calot's Triangle**) by the dissection of peritoneum leaves and cellular tissue.

4. The gall bladder artery and duct are clipped, the gall bladder is detached from the bed.

5. The bladder bed is shortened and the gall bladder is extirpated from the peritoneum.

Evaluation criteria	Number of points
	Conflicts of the members of the brigade-1 point; Conflicts of the members of the brigade
<u>Aesthetics</u>	Clean work with instruments -2 points; Rare mistakes -1 point; Incorrect work of the brigade -0 point.
Work instruments (conflicts of instruments )	Good work with instruments -3 points; Rare mistakes -1 point; Conflicts of instruments -0 points.
Theoretical training (3 questions will be asked for every team)	Right answer -1 point; Incomplete answer -0,5 балла; No answer -0 point.
Time of the performing of the hernioplasty	In 30 min -6 points; In 35 min – 4 points; In 40 min -3 points; In 45 min-1 points; In 50 min-0 point; More than 60 min – completion of the competition.
Maximum number of points	29 points

Proper tools: endoclip (2); endodissector (1); incurved endoscissors (1); endoclipper (1); suture material – vicryl 3\0. Own instruments and suture material must be brought.

If you have any questions and concerns regarding the competition, feel free to contact Sabirzyanov Sabir, tel. 8 967 458 13 48