

FEDERAL STATE INSTITUTION  
THE RUSSIAN FORENSIC EXAMINATION CENTER OF  
THE MINISTRY OF HEALTHCARE AND SOCIAL DEVELOPMENT  
OF THE RUSSIAN FEDERATION

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EXPERT OPINION No. 555/10  
(additional medical forensic examination)

During the period from October 07, 2010 (11:30 a.m.) to June 15, 2011 (14:00 p.m.) on the basis of the order issued by the special investigator of the second department for the investigation of special cases of the crimes against person and public security of the Investigative Committee Main Investigations Directorate, Lieutenant Colonel of Justice M.O. Lomonosova dated 30.09.2010, in the rooms of the additional complicated forensic expertise department of the Ministry of Healthcare and Social Development of FGU RFEC the commission including:

- Vladimir Anatolievich Lyanenko, Deputy director of FGU “Russian Forensic Examination Center” of the Russian Federation Ministry of Healthcare and Social Development for the expert activity, medical degree, special training in forensic medicine, forensic expert highest qualification, candidate of medical science, work experience since the year 1996;
- Leonid Alexandrovich Shmarov, Head of the additional complicated forensic expertise department of FGU “Russian Forensic Examination Center” of the Ministry of Healthcare and Social Development, medical degree, special training in forensic medicine, forensic expert highest qualification, candidate of medical science, work experience since the year 2001;
- Konstantin Valentinovich Shatalov, Head of department of the infant congenital cardiac anomaly emergency surgery, coordinator of the “Heart transplantation” program of the Russian Academy of Medical Sciences Cardiovascular Surgery Scientific and Research Center named after A.N. Bakulev, graduate of medical education, highest qualification, special training in cardiac surgery, M.D. degree, academic rank of professor, work experience by profession since the year 1989;
- Ivan Vyacheslavovich Klyuchnikov, Chief Research Officer of the Coronary heart disease surgical treatment department of the Cardiovascular Surgery Scientific and Research Center named after A.N. Bakulev of the Russian Academy of Medical Sciences, medical degree, highest qualification, special training in cardiology, Dr.scient.med, M.D. degree, academic rank of professor, work experience by profession since the year 1989;
- Vladimir Trofimovich Ivashkin, Head of Department of Propaedeutics of Internal Diseases of the Moscow Medical Academy named after I.M. Sechenov, Director of the Clinic of Propaedeutics of Internal Diseases, gastroenterology and hepatology named after V.Kh. Vasilenko, Chief Gastroenterologist of the Russian Federation Ministry of Healthcare and Social Development, medical degree, highest qualification, special training in gastroenterology, M.D. degree, academic rank of professor, member of the Russian Academy of Medical Sciences, Honored Worker of Science, work experience by profession since the year 1964;

- Yuriy Viktorovich Marchenkov, the acting Head of the clinical department and head of the critical condition clinical pathophysiology laboratory of the Scientific and Research Institute of the Resuscitation named after V.A. Negovskoy of the Russian Academy of Medical Sciences, medical degree, highest qualification, special training in resuscitation science, M.D. degree, work experience by profession since the year 1991;
- Lev Vladimirovich Kaktursky, Director of the Scientific and Research Institute of Human Morphology of the Russian Academy of Medical Sciences, Head of the Department of Pathologic Anatomy of the First Moscow State Medical University named after I.M. Sechenov, Corresponding Member of the Russian Academy of Medical Sciences, highest qualification, M.D. degree, special training in pathologic anatomy, work experience by profession since the year 1968,

carried out the additional medical forensic examination with regard to Magnitsky Sergey Leonidovitch, year of birth 1972.

The explanation of the rights and responsibilities of the expert prescribed by Article 57 of the RF CPC and the warning of the penal responsibility under Article 307 of the RF CPC have been provided.

Experts: (signature) V.A. Lyanenko, (signature) L.A. Shmarov; (signature) K.V. Shatalov; (signature) I.V. Klyuchnikov; (signature) V.T. Ivashkin; (signature) Yu.V. Marchenkov; (signature) L.V. Kartursky

**Round stamp  
of FGU Russian Forensic Examination Center**

**Questions asked to experts:**

1. Which of the failures in the medical aid provided to S.L. Magnitsky, revealed by the expert commission and listed in Expert Opinion No. 555/10 dated 15 June 2011, namely:
  - failure to take necessary diagnostic measures despite complaints of dull pains in the right hypochondrium and pains in the stomach pit, nausea and vomiting;
  - failure to take necessary diagnostic measures despite complaints of heart pains radiating to the back;
  - failure to prescribe a timely adequate treatment of the existing diseases that caused the death;
  - failure to take necessary diagnostic measures despite the suspected diabetes, the first signs of which were observed on 13 November 2009;
  - failure to give an appropriate therapy at the time of a sudden breakdown in the health condition, which took place approximately at 19:00 on 16 November 2009;are in the direct cause-effect relation to the grave consequences which manifested themselves in the death of S.L. Magnitsky?

**Documents presented for the examination:**

1. Files of criminal case No. 201/366795-10 in 5 volumes.
2. Outpatient Medical Record No. 17, from Ideal Diagnostic and Treatment Center, in the name of S.L. Magnitsky.
3. Medical record of FGU IZ-77/5 in the name of S.L. Magnitsky.
4. Case Record No. 318 in the name of S.L. Magnitsky.
5. Case Record No. 352 in the name of S.L. Magnitsky.
6. Case Record No. 781 in the name of S.L. Magnitsky.
7. Accompanying Sheet No. 782896 of the emergency call service.

8. A xerox copy of Expert Opinion No. 555/10 (the repeated additional medical forensic examination) of FGU Russian Center of Forensic Medical Examination of the Ministry of Healthcare and Social Development of the Russian Federation.

### **CIRCUMSTANCES OF THE CASE**

From the ruling on appointment of an additional medical forensic expertise it follows that:

“...this Criminal Case was initiated on November 24, 2009 pursuant to part 2 of Article 124 and part 2 of Article 293 of the Criminal Code of the Russian Federation based upon the death of Sergey Leonidovich Magnitsky, born on April 08, 1972, in the Federal Budgetary Institution (FBU) Pretrial Detention Centre IZ-77/1 of RF Federal Penitentiary Service Administration (UFSIN) of Moscow.

On 18 July 2011 the criminal case was joined with the proceedings under criminal case No. 201/713112-11 initiated with respect to correctional system officers L.A. Litvinova (under Part 2, Article 109 of the RF Criminal Code providing for responsibility for causing death by negligence in consequence of improper fulfillment by the officer of his/her professional duties) and D.B. Kratov (under Part 2, Article 293 of the RF Criminal Code stipulating criminal responsibility for neglect of duty that has led by negligence to a person's death).

For the purpose of identifying the reason for the death of S.L. Magnitsky several forensic medical examinations were conducted during the investigation, including the repeated (regarding questions) additional (regarding new questions) commission medical forensic examination at FGU Russian Federal Center of Forensic Medical Examination of the Ministry of Healthcare and Social Development of the Russian Federation. A commission of experts was involved for conducting the examination; conclusions of the commission were rendered in Opinion No. 555/10 dated 15 June 2011.

According to the conclusions rendered in the said Opinion, the death of S.L. Magnitsky was caused by an acute heart failure, which resulted from the ventricular fibrillation against the secondary dysmetabolic cardiomyopathy and the active chronic hepatitis.

Furthermore, the expert commission concluded that the medical aid had been rendered to S.L. Magnitsky with a number of failures, which are in the direct cause-effect relation to the consequences that followed.

The revealed failures listed in the answer to Question No. 8 are grouped in five sub-groups:

1. failure to take necessary diagnostic measures despite complaints of dull pains in the right hypochondrium and pains in the stomach pit, nausea and vomiting, which, had they been taken, may have helped to diagnose in good time the chronic active hepatitis and the diabetes suffered by S.L. Magnitsky;
2. failure to take necessary diagnostic measures despite complaints of heart pains radiating to the back; however, even if fully taken, such measures would not have guaranteed diagnosing the cardiomyopathy;
3. failure to prescribe a timely adequate treatment of the existing diseases that caused the death, namely, manifestations of the chronic active hepatitis (at the same time, there were no indications for prescribing an appropriate therapy because there were no clinical implications of the secondary dysmetabolic cardiomyopathy);
4. failure to take necessary diagnostic measures despite the suspected diabetes, the first signs of which were observed on 13 November 2009, which, had they been taken, may have helped to diagnose the disease;
5. failure to give an appropriate therapy at the time of a sudden breakdown in the health condition, inadequate behaviour, exaltation, disorientation, a dialogue with “voices” and heart fluttering, which took place approximately at 19:00 on 16 November 2009.

The above-listed sub-groups are followed in the text by the summarized conclusion:

“Had they been taken all together, the above-listed diagnostic measures would have helped to timely diagnose the diabetes and the chronic active hepatitis, suffered by S.L. Magnitsky, and to prescribe an appropriate treatment, which would have prevented the advance of the diseases and, consequently, the secondary dysmetabolic cardiomyopathy, and would have made it possible to avoid the negative outcome, that is the death that took place on 16 November 2009.

S.L. Magnitsky was deprived of a chance to stay alive because the listed measures were not taken.

Hence, the failures in providing S.L. Magnitsky with medical aid are in the direct cause-effect relation to the negative outcome, that is his death”.

As the failures listed in the expert opinion were allowed by different medical officers in different detention centers of Moscow, it is necessary to delineate their actions and, consequently, to answer the question whether the consequences that followed were caused by all these failures revealed in the medical aid provided to S.L. Magnitsky, taken all together, or by some of the listed failures.

In this connection the investigation questioned L.A. Shmarov, the chief officer of the division of repeated complex forensic medical examinations of FGU Russian Federal Center of Forensic Medical Examination of the Ministry of Healthcare and Social Development of the Russian Federation, who was a member of the expert commission. According to the expert’s testimony, the failure in the provision of the medical aid referred to in Paragraph 5 of the answer to Question No. 8, that is the failure to give S.L. Magnitsky an appropriate therapy at 19:00 on 16 November 2009, is not a diagnostic measure, the non-provision of which was in the cause-effect relation to the subsequent negative consequences, that is the patient’s death. The expert also explained that cardiac stimulant activities were not likely to give any positive effect because of the severity of the disease suffered by S.L. Magnitsky (the secondary dysmetabolic cardiomyopathy), hence, it may be concluded that non-provision of such activities is not in the cause-effect relation to the consequences that followed...”

## **EXAMINATION**

The examination of the provided materials was carried out based on the standard examination practice applicable in the forensic medicine for examining the similar type of the expertise objects published in the respective manuals and governing documents on forensic medical examination practice.

The appraisal of the results received in course of the implementation of the subsequent additional commission examination in question is provided by the expert commission both in the examination part of the present Report and in its conclusive part.

### **1. Examination of the criminal case materials**

**1.1. From the copy of the expert opinion (dead body examination) No. 2052 of Moscow Healthcare Department Forensic Expertise Agency Tanatological Division No. 11 dated 29.12.2009 (Volume 1, pages 43-49) it follows that: “...external examination. On the right upper limb of the corpse and on its left lower limb there are labels with a record made by an employee of thanatological department No.11: “2052 Magnitsky 185” – one label per limb. On the right upper limb there is a label with a record made by an employee of the “Deceased Citizens Transportation Service ... Magnitsky Sergey Leonidovich”. On the outer surface of the right lower limb there is a writing in brilliant green: “IZ-77/1 Magnitsky S.L. year of birth 1972 Death 09:50pm 16/XI 09”.**

The following clothes were taken off the corpse and examined: dark-blue cotton underpants, black cotton socks. All the items were put on properly, of medium wear-and-tear, no damage or soiling was found. The corpse of a man, regular build, satisfactory nutrition, body length of 185 cm. Skin integument is of pale grey color, dry, moderately flexible, cold to the

touch in all the areas. Cadaveric rigidity is well expressed in the muscles of masticatory muscle system, in the neck muscles and the limbs. Cadaveric lividities are abundant, livid purple, diffused, located on the back surface of the neck, the body, upper and lower limbs (illegible) not found on the scalp. The bones of the facial skeleton, the nasal cartilages are unbroken to the touch. The eyes are closed. The mucous coat of the eyelids is whitish yellow. The corneas are dim, semiopaque, the pupils are round, equal-sized, each 0.4cm in diameter. The external auditory meati, nasal passages and the oral cavity are unobstructed and clear. The mouth is closed, the tongue is in the oral cavity, behind the line of joining of teeth. The vermilion border is livid, dried up. The mucous coat of the vestibule of mouth and of the oral cavity is livid grey, without injuries, the labial frenula are without hemorrhages or injuries. The teeth are natural, undamaged, there are no traumatic teeth injuries, no teeth with crowns made of yellow metal was found. The neck is properly formed, in proportion to the body. The thoracic cage is cylinder-shaped, symmetrical, the ribs are unbroken to the touch. The abdomen is a little below the level of the costal margins. In the right iliac region there is a post-operation cicatrix, skewed horizontal, directed from left to right and from bottom upwards, sized 7.0x0.7cm, greyish whity, slightly indrawn, tightly soldered with subjacent soft tissues. There is normal male pubic hair distribution on the pubis, the external genital organs are regularly shaped, with no ooze, injuries, cicatrices or ulcerations. The balanus is smooth, without ulcerations or cicatrices. There is a slot-shaped urethral orifice on its tip with no oozing from it. The scrotum is asymmetric, wrinkled, grey-brown. The testes in the scrotum are easily movable. The anus is closed, skin integuments around it are not dirty or damaged. Bones of the limbs are not broken to the touch.

Injuries. On the right upper limb, in the projection of the radiocarpal joint, there is a circulatory, unevenly expressed vivid-purple bruise with distinct borders, 0.7cm in width along the whole length; the surrounding soft tissues are slightly swollen and edematous. On the left upper limb, in the projection of the radiocarpal joint, there is a circulatory vivid-purple bruise of a broken contour shape, from 0.5cm to 1.0cm in width; the soft tissues around are slightly swollen and edematous, the borders of the bruise are distinct; against the background of the above mentioned bruises there are multiple stripe-like horizontal scratches from 0.7x0.3cm to 1.0x0.4cm in size, with a red-brown surface, dried, slightly falling in against the level of the surrounding skin integument; the borders of the scratches are distinct. On the left opisthenar, in the projection of the metacarpal bone of the 5<sup>th</sup> finger, there are two analogous round shaped scratches, each 0.7cm in diameter, with a red-brown surface, dried, slightly falling in against the level of the surrounding skin integument; the borders of the scratches are distinct. On the left opisthenar, in the projections of the heads of the metacarpal bones of the 2<sup>nd</sup>, the 3<sup>rd</sup> and the 4<sup>th</sup> fingers there are round shaped livid purple bruises, 0.8cm in diameter; the soft tissues are slightly swollen and edematous, the borders of the bruises are distinct. On the front surface of the left surae, in the upper third part, there is a vertical oval shaped scratch, 2.3x1.7cm in size, with a red-brown surface, dried, slightly falling in against the level of the surrounding skin integument; the borders of the scratch are distinct. On the inner surface of the right lower limb, in the projection of the ankle joint, there is a purple round shaped bruise with a greenish tinge on the periphery, 2.0cm in diameter; its borders are indistinct. In the subjacent soft tissues, in the projection and correspondingly to the above described injuries, there are shiny dark red hemorrhages, from 0.3cm to 0.8cm in thickness, except for the bruise on the inner surface of the right lower limb, in the projection of the ankle joint, where the hemorrhage is dim, dry, red brown, up to 0.1cm in thickness. No other injuries were found during the external examination of the corpse.

Internal examination. The result of the test for air embolism is negative. The internal surface of soft tissues of the head is damp, glossy, greyish pink, without haemorrhages. The temporal muscles are greyish red, damp, glossy, without haemorrhages. The bones of the skull cap are intact. No blood is found between the cranial bones and the meninx fibrosa. The meninx fibrosa is unstressed, intact; greyish whitish, smooth, glossy; easily detachable from the cranial bones; liquid dark red blood is found in its sinuses, no haemorrhages are found over and under it.

No blood, liquids, synechias have been detected between the meninges. The meninx vasculosa is smooth, glossy, transparent, moderately full-blooded, without haemorrhages, a small amount of transparent yellowish liquid is found under it. At the level of the frontal and parietal lobes at the inter-hemispheric cleft it is locally thickened, greyish, opaque due to multiple whitish granulations. The brain contour is uniformly defined along the whole length. The medullary substance at the cut surface is glossy, with well-defined anatomic pattern and border between the grey and white substance, and it does not stick to the knife. The lumens of the cut vessels at the cut surface effuse substantial quantity of liquid blood in the shape of dots and stripes easily removed with the back edge of the knife. The lateral ventricles are cleft-type, symmetric, non-dilated, with a small amount of pale transparent neurolymph; the third and the fourth ventricles contain traces of pale transparent neurolymph; no blood detected, the internal surface is smooth and glossy. The vascular plexuses of the ventricles are botryoidal, bluish purple, small-grained. The nuclei are light grey, sharply outlined. Neither mollities, nor haemorrhages, nor cystic lesions have been detected in the cortex, subcortical structures, pons varolii, medulla oblongata and other parts of the brain. The cerebellum at the cut surface has a well-defined pattern and border between the grey and white substance, without haemorrhages. Vessels of the base of brain are correctly shaped, wavy, with moderate quantity of dense whitish plates at the internal surface. The hypophysis is soft elastic, bluish grey at the cut surface, without haemorrhages. The brain weight is 1 400 g. The meninx fibrosa has been stripped from the skull base bones; the skull base bones are intact. The soft tissues of the cervix, thorax and abdomen have been dissected and investigated layer by layer. No haemorrhages have been detected in the tissues. The organs in the thoracic and abdominal cavities are positioned correctly. No liquids, blood, synechias are found in the cavities. The liver does not protrude from the costal arch. The thickness of the subcutaneous fat is 1.2 cm at the front surface of the thorax, and 3.5 cm at the abdominal wall. The parietal pleura and parietal peritoneum are smooth, glossy, damp, yellowish grey. The height of the right hemidiaphragm corresponds to the 4<sup>th</sup> rib, and the height of the left hemidiaphragm corresponds to the 5<sup>th</sup> intercostal space. The gaster and intestines are not inflated, their surface is smooth, whitish grey. The abdominal membrane is damp. The mucosa of the tongue is greyish red with well-defined papilla; a point-like punctured wound with regular edges has been found at the tongue root in the projection of the sublingual vein, a dark red glossy haemorrhage, 0.2×0.2 cm in size, matching the wound has been found in the muscles; besides the above described haemorrhage the muscle at the cut surface is greyish brown, without haemorrhages and cicatricial changes. No damages have been detected at the area of the tongue frenulum. The entry into the larynx and oesophagus is unobstructed. The tongue bone and laryngeal cartilages are intact, no haemorrhages are found in the surrounding soft tissues. The thyroid gland: the dimensions of the left lobe = 5.0×1.8×1.5 cm; the right lobe = 5.0×1.8×1.5 cm, the gland is dense elastic, dark red and small-grained at the cut surface. The oesophagus contains a small amount of greyish black mucus, its mucosa is grey, damp, glossy, creased. The trachea lumen is unobstructed, the lumens of the primary bronchi contain a small amount of transparent mucus. The mucosa of the trachea and bronchi is grey and glossy. The pulmonary pleura is smooth and glossy, not thickened, no haemorrhages are found under it. The lungs occupy the pleural cavities completely covering the mediastinal organs, the texture is aerial and doughy to the touch. The weight of the right lung is 550 g, left lung – 600 g. The tissues of the lungs at the cut surface are dark red, without nidal changes, the cut surface effuses (illegible) of the bronchi are slightly thickened, their cut ends protrude from the cut surface up to 0.3 cm; when the lung tissue is pressed, the lumens produce no discharge. The lumens of the pulmonary arteries and veins are unobstructed. The weight of the right lung is 550 g, left lung – 500 g. No haemorrhages have been detected under the costal pleura. The lymph nodes of the lung roots are not enlarged, the texture is dense elastic to the touch; greyish black at the cut surface, without haemorrhages. No haemorrhages have been detected in the cellular tissue of the anterior mediastinum. The cavity of the pericardial sac contains approximately 20 ml of transparent yellowish liquid; its internal surface is smooth and whitish. The heart in the shape of irregular cone

(dimensions=13.0×11.0×3.5 cm, weight=400 g) is slightly flabby, with rounded top; the epicardium is thin, transparent, glossy; a considerable quantity of fatty tissues is found under it. The atrial auricles are unobstructed. The oval window of the interatrial septum is closed. The thickness of the myocardium of the left ventricle is 1.8 cm, right ventricle – 0.5 cm. The myocardium is flabby, dark red, with a non-uniform yellowish shade, lustreless. The endocardium is pale grey, semi transparent, smooth. The cusps of the cardiac valves are thin, smooth, glossy, non-joined, the chords are thin and long. The perimeter of the aortic valve is 7.5 cm, of the pulmonary artery – 8.5 cm, of the bicuspid valve – 11 cm, of the tricuspid valve – 13.5 cm. The papillary and trabecular muscles are slightly enlarged. The cardiac cavities are acutely dilated and contain liquid dark red blood. The cardiac blood supply is of mixed type. The intima of the coronary arteries is pale yellow, smooth, glossy, slightly irregularly thickened. The perimeter of the aorta at the level of the aortic hiatus is 4.5 cm. The intimas of the aorta, the celiac trunk and its branches, the renal and mesenteric arteries are pale yellow, glossy with moderate quantity of flat, soft, greyish yellow stains. The lumen of the inferior vena cava is empty, its perimeter is 7.0 cm, the intima is pale grey, smooth, glossy. The spleen is 14.0×6.0×3.0 cm, 100 g, slightly flabby, the splenic capsule is grey and wrinkled; the cut surface of the spleen is dark red without scraping. The suprarenal glands are of irregular triangular shape, with a well-defined border between the yellow cortical substance and the semi-liquid brown medullary substance. The fibrous capsule of the both kidneys strips easily showing the red-brown smooth surface. The kidneys: the right kidney is 12.5×5.5×3.0 cm, 120 g, the left kidney is 12.0×5.0×3.0 cm, 115 g. The tissue of the kidneys is red-brown at the cut surface with a well-defined border between the cortical substance and the medullary substance. The pelvicalyceal system is not dilated. The mucosa of the pelvises is greyish yellow, smooth, without haemorrhages. The ureters are patent along the whole length. The urinary bladder is empty, its mucosa is creased, glossy and grey. The gaster contains approximately 300 ml of dark grey fluid mass, its mucosa is grey, the creases are well defined. The pylorus is patent, the duodenum contains some quantity of greyish yellow fluid mass. The gall bladder contains approximately 10 ml of greenish brown bile. The mucosa of the gall bladder is whitish grey, slightly indurated and thickened up to 0.4 cm, damp, smoothed. The cavity of the gall bladder contains multiple yellowish green stony lumps with rough surfaces and dimensions from 0.5×0.5 to 1.0×1.0 cm. The liver is 28.0×16.0×19.0×8.0 cm, 1 800 g, yellowish brown, dense to the touch, with smooth surface and pointed bottom edge. The cut surface of the liver tissue is brownish-yellow, the cut vessels effuse dark liquid blood. The pancreatic gland is extraperitoneal, in the shape of a dense elastic band, the dimensions are 20.0×5.0×5.5 cm; the cut surface shows well-defined large and average lobes, the colour is greyish with a yellowish shade, without haemorrhages. The vermicular appendix is absent, the growth of greyish yellow tissues is observed at the place it had been. The small intestine contains yellowish semi-fluid mass. The large intestine contains moderate quantity of semi-shaped greenish-brown faecal matter, without pathological impurities. The mucosa of the intestines is grey, creased and glossy along the whole length; the serous coat is transparent, smooth and glossy. The texture of the prostate gland is dense elastic; the cut surface is pale grey, with a fibrous structure. The testes are yellowish at the cut surface, the seminal filaments are stretchable. The skeleton bones are intact. The cavities and organs of the corpse have produced no foreign smells.

A blood sample and a kidney have been sent to the forensic chemical laboratory for alcohol testing.

Samples of blood and internal organs (kidney, liver, gaster and small intestine) have been sent to the forensic chemical laboratory to be tested for narcotic drugs, soporific and minor tranquilizers.

The following samples have been sent to the forensic histological laboratory: brain sample – 1, lung sample – 1, heart samples – 3, liver sample – 1, pancreatic gland sample – 1.

A blood sample has been sent to the biological department to define the blood group. Some samples of internal organs are stored in the histological archive (samples of brain, lung, heart, coronary artery, liver, kidney, spleen, thyroid gland, pancreatic gland).

The injuries made to the corpse have been photographed with a digital camera...

Forensic medical diagnosis. Basic disease. Secondary cardiomyopathy: dystrophy and hypertrophy of the myocardium (heart weight is 400 g, thickness of the left ventricle is 1.8 cm), acute dilatation of cardiac cavities, fatty degeneration of epicardium. Complications to the basic disease. Hyperemia of internal organs, oedema of meninx. Associated diseases. Calculous cholecystitis. Fatty degeneration of the liver. Fibrous degeneration of the meninx vasculosa. Lipomatosis of the aorta and its large branches. Lipomatosis of the pancreatic gland. Bruises and scratches on the upper limbs. A bruise and a scratch on the left lower limb. A punctured wound at the tongue root in the projection of the sublingual vein. Condition after former surgical treatment (appendectomy).

Preliminary medical certificate of death No.217204 is issued for: a) Congestive heart failure b) Cardiomyopathy (142.9).

...the Forensic Chemical Examination Report No. 16377-g: there is no ethyl alcohol, methyl alcohol or propyl alcohols discovered in the dead body blood and kidney...

On December 2, 2009 the Forensic Histologic Examination opinion No.14519 was obtained. Extract from the expert opinion of the Forensic Histologic Examination. Pancreas - the provided specimen has a preserved composition structure. There is enlargement of fatty tissue between the lobules and inside the lobules, and insignificant thickness and fibrosis of canal walls, mild enlargement of connective tissue around the canals and vessels, a sharp enlargement and plethora of the stroma vessels. Histologic diagnosis. Postprimary cardiomyopathy. Enlargement of fatty tissue around the vessels, under the epicardium and between the muscle fibre bundles. There are alternate areas of mildly hypertrophic cardiac myocytes and thinned and undulant distorted cardiac myocytes. There are areas of muscle fibre fragmentation, perivascular cardio sclerosis. Evident sanguimotory changes in the surveyed organs with fine-focal subarachnoidal hemorrhages and hemorrhages in the stroma of the myocardium from the clearly contouring erythrocytes without a perifocal cellular reaction. Pulmonary edema with a hemorrhagic sign. Cerebral edema. Fatty hepatitis. Chronic active long-lasting hepatitis. Lipomatosis of the pancreas. Mild perivascular and peribronchial pneumosclerosis. Fibrosis of meninx vasculosa.

On December 28, 2009 the conclusion of the legal and chemical examination No.4732-x/16377-g was obtained. No derivatives of barbituric acid, morphine, codeine, dionine, heroin, hydrocodone, promedol, elenium, tazepam, seduxen, aminazin, tiserzin, triftazine, majeptil, isopromethazine, imipramine have been found in the gaster, liver and kidney investigated separately. No morphine or morphine derivatives have been found in the blood.

...Forensic medical diagnosis (updated after acquiring the results of the additional research). Basic disease. Secondary cardiomyopathy: dystrophy and hypertrophy of the myocardium (heart weight is 400 g, thickness of the left ventricle is 1.8 cm), acute dilatation of cardiac cavities, fatty degeneration of epicardium (histological diagnosis: growth of fatty tissues around the vessels, under the epicardium and between the bundles of muscle fibres, areas of alternate arrangement of slightly hypertrophied cardiomyocytes and thinned and wave-misshapen cardiomyocytes, areas of fragmentation of muscle fibres, perivascular cardiosclerosis). Complications to the basic disease. Hyperemia of internal organs, oedema of meninx vasculosa and brain substance, pulmonary oedema, liquid condition of blood. Associated diseases. Calculous cholecystitis. Fatty degeneration of the liver. Fibrous degeneration of the meninx vasculosa. Lipomatosis of the aorta and its large branches. Lipomatosis of the pancreatic gland. Chronic persistent hepatitis. Bruises and scratches on the upper limbs. A bruise and a scratch on the left lower limb. A punctured wound at the tongue root in the projection of the sublingual vein. Condition after former surgical treatment (appendectomy). Final medical certificate of death is issued instead of the preliminary certificate...



1. a) Congestive heart failure b) Cardiomyopathy (142.9)

Conclusions. 1. Death of citizen SERGEY LEONIDOVICH MAGNITSKY, aged 37, according to the degree of the putrid phenomena expression, occurred 12-15 hours prior to the forensic medical examination of the corpse in the dissecting room of thanatological department No.11, which took place at 10:10am on November 17, 2009, of congestive heart failure developed in consequence of secondary cardiomyopathy – a pathological change of the cardiac muscle, which is evidenced by morphological signs (dystrophy and hypertrophy of the myocardium, acute dilatation of cardiac cavities, fatty degeneration of epicardium) (illegible) around the vessels, under the epicardium and between the bundles of muscle fibres, areas of alternate arrangement of slightly hypertrophied cardiomyocytes and thinned and wave-misshapen cardiomyocytes, areas of fragmentation of muscle fibres, perivascular cardiosclerosis).

2. The following injuries were found in the course of the forensic medical examination of the corpse: scratches on the left opisthenar in the projection of the metacarpal bone of the 5<sup>th</sup> finger, bruises on the left opisthenar in the projections of the heads of the metacarpal bones of the 2<sup>nd</sup>, the 3<sup>rd</sup> and the 4<sup>th</sup> fingers; a scratch on the front surface of the left surae, an bruise on the inner surface of the right lower limb in the projection of the ankle joint, which were inflicted as result of an impact and slip action of a blunt hard object (objects) shortly before death (except for the bruise on the inner surface of the right lower limb, in the projection of the ankle joint, which was inflicted 3-6 days prior to the moment of death), they bear the signs of intravitality, and such injuries inflicted to living persons do not lead to temporary loss of capacity for work or minor stable loss of general capacity for work and are not regarded as harm to the health, and they have no cause-effect relations with the death: - bruises on the right and left upper limbs in the projection of the radiocarpal joints; scratches against the background of the bruises in the projection of the right and left radiocarpal joints were inflicted as result of a squeezing and slip action of a blunt hard object (objects) with a limited traumatizing surface shortly before death, they bear the signs of intravitality, and such injuries inflicted to living persons do not lead to temporary loss of capacity for work or minor stable loss of general capacity for work and are not regarded as harm to the health, and they have no cause-effect relations with the death.

Also, there was a punctured wound at the tongue root, in the projection of the sublingual vein, bearing the signs of intravitality, which was inflicted by the action of a sharp lancinating object – a medical needle, as specified in the act on the death issued by the Federal Budgetary Institution Pretrial Detention Centre IZ-77/1 of RF Federal Penitentiary Service Administration of Moscow, and, being a necessary medical procedure, it is not subject to forensic medical assessment as to severity of harm to the health.

3. After the infliction of the above mentioned injuries the victim could do various dynamic actions during an indefinite long period of time.

4. The bruise on the inner surface of the right lower limb in the projection of the ankle joint was inflicted 3-6 days prior to the moment of death. It is impossible to establish the consequence of infliction of all the other injuries due to the fact that they all were received within the same short period of time before the moment of death.

5. In the course of the forensic chemical examination ethyl, methyl and propyl alcohols were not detected in the blood and kidney samples.

6. In the course of the forensic chemical examination no derivatives of barbituric acid, morphine, codeine, dionine, heroin, hydrocodone, promedol, elenium, tazepam, seduxen, aminazin, tiserzin, triftazine, majeptil, isopromethazine, imipramine were found in the gaster, liver and kidney investigated separately; no morphine or morphine derivatives were found in the blood.

7. A blood sample was sent to the biological department to define the blood group.

**1.2. From the copy of the expert opinion (forensic histological examination) No. 14519 of Moscow Healthcare Department Forensic Expertise Agency Forensic Histological**

**Examination Division 02.12.2009 (Volume 1, page 55)** it follows that: "...seven histologic specimens painted with hematoxylin and eosin were reviewed.

Cerebrum (1): the provided specimen represents a fragment of cerebral cortex with a fragment of unevenly fibrosized meninx vasculosa. Vascular distention and plethora of cerebral vessels and meninx vasculosa with erythrosthesis in them were noted, as well as moderately evident ectasia of perivascular and pericellular spaces; there is minor swelling and dystrophic changes of neurons. The meninx vasculosa has singular perivascular hemorrhages from the clearly contouring erythrocytes without a perifocal cellular reaction.

Heart (3): the provided specimens represent enlargement of fatty tissue around vessels, under the epicardium and between the muscle fibre bundles, a moderately evident enlargement of connective tissue along the vessels, the walls of intramural arteries are not thickened, their lumen is not stenosed. There are alternate areas of mildly hypertrophic cardiac myocytes and thinned and undulant distorted cardiac myocytes. There are areas of muscle fibre fragmentation. It was noted that the vessels of stroma are enlarged and plethorical, and some vessels have fibrosis thrombi. The stroma has singular fine-focal hemorrhages from the clearly contouring erythrocytes without a perifocal cellular reaction. One of the provided specimens represents a slight sclerosis of endocardium.

Lung (1): the represented specimen shows a sharp enlargement and plethora of stroma vessels and interalveolar septums, some alveoles are filled in with homogeneous hydropic fluid with admixture of contouring erythrocytes. There is minor enlargement of connective tissue around the bronchi and vessels.

Liver (1) – the provided specimen shows a focal large vacuole infiltration of hepatocytes, ill-defined enlargement of connective tissue in triad with their evident lymphatic histiocytic infiltration with admixture of neutrophils and singular eosinophils. There are neutrophils in lumen of some canals, walls of some canals are infiltrated with neutrophils. There is a plethora of sinusoids and the central veins, cholestasia. Liver capsule is fibrosized, without overlaps.

Pancreas (1): the provided specimen has a preserved composition structure. There is enlargement of fatty tissue between the lobules and inside the lobules, and insignificant thickness and fibrosis of canals walls, mild enlargement of connective tissue around the canals and vessels, a sharp enlargement and plethora of the stroma vessels.

Histologic diagnosis. Postprimary cardiomyopathy. Enlargement of fatty tissue around the vessels, under the epicardium and between the muscle fibre bundles. There are alternate areas of mildly hypertrophic cardiac myocytes and thinned and undulant distorted cardiac myocytes. There are areas of muscle fibre fragmentation, perivascular cardio sclerosis.

Evident sanguimotory changes in the surveyed organs with fine-focal subarachnoidal hemorrhages and hemorrhages in the stroma of the myocardium from the clearly contouring erythrocytes without a perifocal cellular reaction. Pulmonary edema with a hemorrhagic sign. Cerebral edema. Fatty hepatosis. Chronic active long-lasting hepatitis. Lipomatosis of the pancreas. Mild perivascular and peribronchial pneumosclerosis. Fibrosis of meninx vasculosa.

**1.3. From the copy of the expert opinion (examination of the materials of the case) No. 40-10 of Moscow Healthcare Department Forensic Expertise Agency dated 12.05.2010 (Volume 1, pages 59-80)** it follows that: the subsequent additional forensic histological examination of the histological materials Nos. 2125/2052-10 was carried out: "To resolve the questions set before the experts of the department of commission forensic medical examinations upon the death of S.L.Magnitsky, aged 37, histological specimens No. 2125/2052-10g were prepared at the forensic histological department out of the archived material, which was provided by thanatological department No.11 in histological containers labeled with number "2052" and represented by 13 viscera specimens, and underwent forensic histological examination. In total, 15 specimens were studied, which were dyed with hematoxylin-eosine and as per Rego, and were cast in paraffin.

Cerebrum (2). Weak blood filling of vessels of moderately fibrosed meninx vasculosa. Lymphatic histiocytic moderate infiltration of meninges with single and grouped neutrophils within them. Plethora of cerebrum substance of the big cerebral hemispheres and of subcortical structures, there are single perivascular hemorrhages within the white substance. Ectasia of perivascular and pericellular spaces. Dystrophy of neurons with shrinkage and ischemic changes within some neurons. Lungs (2). Plethora of parenchyma. Focal emphysema with areas of dystelectases. In lumen of alveoli there is unevenly expressed within the limits of the specimens a serous hydropic fluid with a haemorrhagic component. Some individual alveoli have macrophagocytes with a reddish brown cytoplasm. Desquamation of bronchothelium, in lumen of bronchi there are desquamated epithelial cells with traces of mucinous masses, and single macrophagocytes with a reddish brown cytoplasm. Bronchi walls are slightly scleroid with groups of lymphatic histiocytes. Pleural membrane is free of coatings.

Coronary artery (1). Wall of the artery is scleroid, unevenly narrowing the artery lumen by appr. 30%.

Heart (2+2 as per Rego). Lipomatosis within the epicardium. A slight sclerosis of an extracardiac artery wall. Plethora of microhemocirculation vessels of epicardium's adipose tissue. A slight sclerosis of walls of singular intramural arteries of myocardium without any foci of walls intumescence of the most of the arteries. Uneven blood-filling of myocardium. Perivascular fibrosis, there are focal areas of adipose tissue within the perivascular spaces and within the myocardium stroma. A weak reticulated cardiosclerosis with groups of lymphatic histiocytes within the individual visual fields. A slight endocardium fibrosis. Combination of focal areas of atrophy with moderate hypertrophia of the certain cardiac myocytes. Staining discontinuity outlines tortuosity with areas of undulating deformity, with fragments of dark staining of certain cardiac myocytes as per Rego, and cardiac myocyte fragmentation.

Liver (1). Liver capsule is free of coatings. Moderate venous plethora of parenchyma; accumulations of leucocytes within certain sinusoids. Various spot adipose degeneration of hepatocytes of focal expansion. Portal tracts have interlayers of connective tissue with polynuclear leukocytic infiltration, proliferation of bile ducts, impaction of fibrous septa within certain lobules, and migration of singular leucocytes outside the border-line lamina.

Kidney (2). Uneven plethora of layers. A slight walls' sclerosis of some individual arteries, sclerosis of individual glomerules, capsules of individual glomerules; the stroma has fine sclerosis areas. Granular degeneration and hydropic degeneration of canaliculi nephrocyte, reddish brown staining of epithelial cells cytoplasm of certain canaliculi, there are eosinophilic masses with reddish brown mass component within lumen of certain canaliculi. Renal calices were not represented.

Spleen (1). The spleen is represented as great many fine fragments of relatively moderate plethoric red pulp and preserved histological structure. Pancreatic gland (1). Moderate plethora of stroma. Along the way of the stroma there are moderate interlayers of connective tissue with focal lipomatosis. Thyroid gland (1). Plethora of stroma's vessels. Follicles are multiform. Epithelium, lining the follicles, is cubical. In lumens of follicles there is eosinophilic secretion of uneven density.

Forensic histological diagnosis: combination of foci of atrophy and a moderate hypertrophia of some cardiac myocytes, perivascular fibrosis, a focal lipomatosis of myocardium, a slight reticulated cardiosclerosis, a slight fibrosis of endocardium, adipose tissue accretion within the epicardium, nonstenotic mildly expressed coronarosclerosis, a mild sclerosis of extracardiac artery and single intramural arteries of myocardium (signs of cardiomyopathy); uneven blood filling of myocardium, contractional damages, areas of undulating deformities and break of cardiac myocytes. Uneven venous plethora within the organs; edema of cerebrum substance, single extravasates within the white substance of large cerebral hemispheres, neurons dystrophy; pulmonary edema, focal emphysema with areas of dystelectasis; hydropic degeneration of some nephrocytes with very slightly expressed excretive component. Chronic persistent hepatitis of minimal activity; focal generalized, adipose

degeneration of hepatocytes. Moderate fibrosis and lipomatosis of pancreas. Fibrosis of meninx vasculosa. Anisofolliculosis of thyroid gland. Mildly expressed arterioglomerulonephrosclerosis.”

Having studied the materials of criminal case No. 366795, the data of the medical documents and Expert opinion (dead body examination) No. 2052 pursuant to the issues brought forth for resolution, the commission of forensic medical experts came to the following conclusions:

1. Answer to questions 6,7,9. In accordance with the medical record of medical outpatient No. 17 provided by Diagnostic and Treatment Center “Ideal” (LDTs “Ideal”) and the certificate provided by Limited Liability Company “Penta-Clinic” (OOO “Penta-Clinic”), the diseases of S.L. Magnitsky, year of birth: 1972, before his arrest on 24/11/08 and imprisonment, were diagnosed as follows: in August 1989 – bilateral chronic maxillary sinusitis, in February 1993 – concussion of the brain, brain contusion of moderate severity, linear fracture of the roof and the base of the skull (of the right frontal bone with transition to the base of the front cranial fossa), in March 1993 – “cranial disease, extravertebral myotonic syndrome accompanied by osteochondrosis of the, after-effects of a cervical spine trauma after a craniocerebral trauma”, in September 1996 – acute destructive appendicitis, in September 2006 - cerumen impaction of the right ear, otitis externa.

While S.L. Magnitsky was under detention at pretrial detention centres, his diseases were diagnosed as follows: in March of 2009 – acute nasopharyngitis, in July, October and November 2009 – cholelithiasis, active chronic cholecystopancreatitis, in May and October 2009 – chronic osteochondrosis of thoracic spine with radicular pain syndrome of intercostal neuralgia type.

Microscopic and micrographic forensic medical examination of the corpse of S.L. Magnitsky gave the results as follows:

- Pathological changes of internals significant in tanatogenesis (death occurrence); secondary dilated cardiomyopathy;
- Other pathological changes of internals: calculous cholecystitis, signs of chronic exogenous intoxication in the form of fatty degeneration of liver, chronic persistent hepatitis with minimal activity, moderate fibrous degeneration and lipomatosis of pancreas, fibrous degeneration of the meninx vasculosa, lipomatosis of the aorta and its large branches, anisofolliculosis of thyroid, low grade glomerulonephrosclerosis;
- Bruises and scratches in the areas of wrist joints, left hand, left cnemis and right ankle joint.

Death of S.L. Magnitsky occurred as the result of acute heart failure induced by secondary dilated cardiomyopathy, which is confirmed by the results of microscopic and micrographic examinations of his corpse. The conclusion of medical assessor A.N. Borzova is ought to be considered justified. It is necessary to note that the dilated cardiomyopathy diagnosed during the forensic medical examination of the corpse of S.L. Magnitsky may have no symptoms in its clinical course. No signs of aggravations of chronic diseases of S.L. Magnitsky were found in the course of examination of his corpse. At the moment of his death, S.L. Magnitsky had no aggravations of cholelithiasis or pancreatitis (peritonitis, pancreatic abscess, ulcers, decubital ulcers of gall bladder with perforation and hemorrhage, stomach wall and transverse colon necrosis, gastrointestinal hemorrhage and others), individually the specified diseases have no relation to the occurrence of death.

2. Answer to questions 2, 10. While S.L. Magnitsky was detained at pretrial detention centres IZ 77/1, 77/2, 77/5, professional medical aid was rendered to him in an insufficient volume.

After S.L. Magnitsky’ appeal for medical aid on July 01, 2009 with complaints about engirdling pains in the area of the left hypochondrium, on July 02, 2009 he underwent abdominal ultrasound examination and the following diagnoses were established: cholelithiasis, cholecystitis, pancreatitis. For relief of the pain syndrome, S.L. Magnitsky got prescription for the following medicinal products to be taken from July 02, 2009: anesthetics and spasmolysants

were reasonably prescribed, later on anti-inflammatory and antiemetic drugs were prescribed, vasodilators and drugs favoring normalization of functioning of gastrointestinal system: enzymatic and protective (no-spa, baralgin, cerucal, mezim-forte, panzinorm-forte, ranitidine, nitrosorbidum, papaverine, phosphalugel, vitamin B12), diet, including fasting and applying the cold to stomach.

The above mentioned diagnoses, for the purposes of clarification thereof and determination of further treatment of the patient, required laboratory examinations of blood and urine (determination of quantitative concentration of amylase, bilirubin, liver enzymes: aspartate aminotransferase, alanine aminotransferase, alkaline phosphatase, Gamma- Glutamyl Transferase, and the indicators of inflammatory changes in the body, leucocytosis, hemogram shift, etc.), which were not prescribed or performed.

It is necessary to note that throughout the entire period of S.L. Magnitsky's detention at pretrial detention centres (IZ 77/5, IZ 99/1, IZ77/2, IZ 77/1), even upon his appeal for medical aid and during the periods of hospitalization, the necessary laboratory examinations were not performed (blood and urine examinations, etc.). There is only data on examination of his blood as to HIV and syphilis dated May 04, 2009 (negative result).

The method for treatment of aggravations of cholelithiasis, even in the absence of pain syndrome, is a scheduled (for the nearest months) operative therapy including excision of the gall bladder containing concrements. Such therapy, as well as a follow-up ultrasound examination were recommended to S.L. Magnitsky in July 2009, however, as of November 16, 2009 they were not yet performed. Cholagogues (cholenzymum and allochol) recommended to S.L. Magnitsky at IZ 77/2 in November 2009, considering the diagnosed cholelithiasis, were contraindicated to him.

Pancreatonecrosis, established on November 16, 2009 by the medical specialists of IZ 77/1 as a possible reason of death of S.L. Magnitsky, was not confirmed by the results of forensic medical examination of his corpse. An accretion of connective and fatty tissue of his pancreas was determined (signs of fibrous degeneration and lipomatosis), which has no causal connection with the occurrence of his death.

For symptomatic treatment of the diagnosed osteochondrosis of thoracic spine with radicular pain syndrome of intercostal neuralgia type on the right side, the following drugs were prescribed to S.L. Magnitsky: ketorol, ketanov, spasmolgon, tempalgin (in May 2009), diklofenak (in May and October 2009). Such treatment in ambulatory conditions is usually accompanied by manual and physiotherapy, and therapeutic exercises.

S.L. Magnitsky's complaints about pains "in the dorsum area with irradiation in to the heart and stomach areas, lumbago pain at full inspiration" in May 2009, in October 2009 – about pain in the left intercostal space relieved by spasmolysants, were an indication for differential diagnostics of osteochondrosis and cardiac pathology; it was necessary to perform a repeated electrocardiography, ultrasound examination of the heart, biochemical examination of blood to determine/exclude cardiac pathology, which were not performed. A single electrocardiography was performed on October 21, 2009 by the medical specialists of IZ 77/2, which was decoded as follows: "PR – 0.12, QRS – 0.08, QT – 0.38, heart rate 66 beats per minute, regular sinus rhythm, electrical axis of heart – N; insignificant changes are detected". When the abovementioned electrocardiogram was studied by a cardiologist, in the framework of this examination, signs of myocardial hypertrophy of the left ventricle were determined.

Medicinal treatment of acute nasopharyngitis in March 2009 (at IZ 77/5) was sufficient and included febrifuges, antitussics, antimicrobials, anti-inflammatory drugs and expectorants: aspirin, bromhexinum, furacilin, analgin, pectusinum.

Expert commission remarks the low quality of medical records keeping by the medical specialists of pretrial detention centres and their low information value.

Information on the revealed "symptoms of hypovolemia increasing in the course of the last twenty-four hours", "complaints about vomiting every 3 hours", according to the extract from medical record No 352, was not provided with description of the skin integument (dry/humid),

nature of vomiting matters (content, volume), etc. The forensic medical examination of the corpse of S.L. Magnitsky revealed no signs of dewatering (hemoconcentration, stickiness of serous membranes).

The above mentioned faults in rendering medical aid to S.L. Magnitsky have no causal connection with the occurrence of his death.

3. Answer to questions 1,2. It is impossible to make a comprehensive and objective assessment of the resuscitative measures taken on S.L. Magnitsky due to the absence of necessary data in the medical documents, such as: time of cardiac arrest, type of cardiac arrest (asystole/fibrillation), start time of resuscitative measures, correlation of breath frequency and thoracic cage compression frequency, time of transporting the patient to the intensive care ward, resuscitative measures taken during the transportation, cardiac massage efficiency (according to arterial blood pressure values, size of eye pupils, colour of skin integument on the face), etc.

The question of “possibility of saving the life” is a prognostic one and it is beyond the competence of forensic medical examination. At the same time, it is important to note that in case of cardiac arrest induced by secondary cardiomyopathy, which is usually accompanied by cardiomyocytes dysfunction, their metabolic imbalance, fragmentation and contractility disorder, the resuscitative measures, even if administered in full (artificial pulmonary ventilation, closed or open chest cardiac massage, drug or electrical cardiac activation), are of low efficiency, irrespective of the type of cardiomyopathy. Cardiac arrest in case of cardiomyopathy of any type means exhaustion of all the “energy resources” of myocardium and, correspondingly, practically absolute failure of any resuscitative measures.

4. Answer to question 5. The punctured wound at the tongue root found in the course of forensic medical examination of the Corpse of S.L. Magnitsky was a trace of medical injection. There was a record in the act on the death of S.L. Magnitsky: “the traces of injections are the result of administered therapy”; there were no any other traces of injections on the corpse. In view of the above, it was inadvisable to send the soft tissue specimens from the injection area for a forensic chemical research.

5. Answer to questions 3,4. According to the Conclusion on the official check performed under the chairmanship of A.A. Smirnov, Deputy Director of the Federal Penitentiary Service, while providing medical aid to S.L. Magnitsky, the officers should have followed joint Order No.640/19 of the Ministry of healthcare and Social Development of Russia and the Ministry of Justice of the Russian Federation dated 17.10.2005 and the internal regulations of pretrial detention centres of the correctional system, approved by order No.189 of the Ministry of Justice of the Russian Federation dated 14.05.2005. As the above mentioned documents were not presented to the present expert commission, it is impossible to establish whether any violations of such order and regulations took place in the course of providing medical aid to S.L. Magnitsky. Assessment of actions of the officers of the pretrial detention centres is beyond the competence of forensic medical examination, and is a prerogative of judicial and investigating authorities.

6. Answer to question 11. The transportation of S.L. Magnitsky “from pretrial detention centres to judicial authorities” related to psychoemotional stress, deviations from the diet, etc. might have negatively affected the state of his health, however, the available judicial and medical data is not sufficient for objective and reliable assessment of the degree of such effect.

**1.4. From the report of the specialists of FGU “Russian Cardiological Scientific and Industrial Complex” of the Federal Agency for Healthcare and Social Development dated 10.06.2010 (Volume 1, pages 82-86) it follows that: “...Answer to question 1. Normally, developed dilated cardiomyopathy occurs clinically as cardiac failure symptoms (labored breathing, weakness, heartbeat, and swelled feet) or, as found by instrumental research methods, results in increased and dilated cardiac cavities. S.L. Magnitsky had none of such symptoms. Nor did the performed examinations (ECG, X-ray of thoracic cage organs) reveal any abnormal changes. One of the key diagnostic methods used to verify the dilated cardiomyopathy diagnosis**

is ultrasonic heart examination, or echocardiography. This examination method was never used. It should be noted that the fact that the doctors supervising S.L.Magnitsky never suspected that he might have any cardiac diseases and that the performed examinations discovered no cardiac change was probably the reason why no echocardiography was undertaken. Analysis of the clinical pattern of death and postmortem myocard study suggest an arrhythmic nature of death (sudden cardiac death) of the dilated cardiomyopathy patient even before a clinically marked cardiac failure occurred.

Answer to question 2. There are no currently existing methods that allow ultimate recovery of dilated cardiomyopathy patients. Complex drug therapy (angiotensin converting enzyme inhibitors, beta-blockers and diuretics depending on the disease), however, may help prolong such patients' life that may, as clinical practice shows, last for years and even decades, depending on the situation.

Answer to question 3. The only electrocardiogram of S.L.Magnitsky, which has been furnished, shows no "ECG signs" of myocardial hypertrophy of the left ventricle.

Answer to question 4. The signs of myocardial hypertrophy of the left ventricle are not those peculiar to secondary dilated cardiomyopathy.

Answer to question 5. If secondary dilated cardiomyopathy had been diagnosed and complex drug therapy had been administered, the prognosis would have been better. Yet, with S.L.Magnitsky, it was the case of an arrhythmic nature of death (sudden cardiac death) of a dilated cardiomyopathy patient, so it was next to impossible to take any steps and administer complex drug therapy...

Sergey Leonidovich Magnitsky's photofluorograms

1. Description of photofluorogram No.3262 of 20.01.2009

There are no focal or infiltrative changes in the lungs.

The lung pattern is not changed considerably.

There are no circulatory lung dynamics disorders.

The roots of lungs are structural and not dilated.

The diaphragm location is normal.

The pleural recess is free.

The heart is not dilated transversely.

CTI (cardiothoracic index) 44% (Ncp  $\leq$ 50%)

The aorta is not changed.

Opinion: No abnormal changes have been discovered.

2. Description of photofluorogram No.19 (unnamed photofluorogram) of 10.07.2009

There are no focal or infiltrative changes in the lungs.

The lung pattern is not changed considerably.

There are no circulatory lung dynamics disorders.

The roots of lungs are structural and not dilated.

The diaphragm location is normal.

The pleural recess is free.

The heart is not dilated transversely.

CTI (cardiothoracic index) 44% (Ncp  $\leq$ 50%)

The aorta is not changed.

The precava and azygos vein are not dilated.

Opinion: No abnormal changes in thoracic cage organs have been discovered. The cardiac silhouette size has not increased, no dynamics versus the data of 20.01.2009.

Opinion on ECG of S.L.Magnitsky (born in 1972) of 21.10.2009 (RR = 0.89 sec, PQ = 0.13 sec, QRS = 0.08 sec, QRST = 0.33 sec)

Sinus rhythm, cardiac rate 68. Normal position of the electrical axis of the heart. Clockwise rotation along the longitudinal axis. No indications of hypertrophic changes in the myocard: voltage R1 = 7mm, Rv5 = 11.5 mm, Rv5 + Sv1 = 23 mm, i.e. hypertrophy voltage

criteria are absent. The atrial component is unchanged. The repolarization phase (ST-T) is within the norm.

A histological investigation was conducted of myocard specimens stained with hematoxylin-eosine, oil red O and according to Masson and Regaud methods.

Moderate cardiomyocyte hypertrophy is observed. Encountered against this background are bundles of thinned (atrophic) muscle fibers, winding in places. The myocard features areas with cardiomyoliposis and marked cardiomyocyte fragmentation.

There is slight perivascular sclerosis. Myocard interstitium features isolated lymphohistiocytic infiltrates and individual lymphocytes.

In places subepicardial fatty tissue spreads as bands deep into the myocard. Small vessels are unevenly filled with blood.

OPINION: The noted myocardial changes are regarded as typical of dilated cardiomyopathy, possibly toxic genesis.

Developed cardiomyocyte fragmentation is indicative of arrhythmic phenomena occurring at the time of death. Appearance of isolated lymphohistiocytic infiltrates in the myocard is associated with damaged cardiomyocytes...”

**1.5. From the photocopy of the ambulance call card, Order No. 782896** (volume 3, case sheet 209) it follows that: “...date: 16.11.2009. Call accepted at 14:29... Arrival at 14:57. Returned: 19:25...”

Reason: acute pancreatitis. Note: waiting for the convoy 2 hours 35 minutes...

Diagnosis: acute cholecystopancreatitis. Delivered to the hospital of FBU IZ 77/1, a special purpose hospital, accompanied by the convoy...

Complaints of pains in the right and left hypochondrium, pit of the stomach, nausea. Ill for three days, being attended and examined in the isolation ward, the condition did not improve. Was transferred to the Matrosskaya Tishina hospital. Anamnesis: chronic cholecystopancreatitis. Objectively: the general condition is satisfactory, average severity, clear consciousness, passive position. Skin of usual colour... T 36.6. Respirations are free, rhythmical, vesicular, no rale. Respiration rate: 18. Pulse = 78, regular, strength satisfactory. Arterial pressure: 150/80, regular: 130-140/80. Heart tones are clear, no murmurs. The tongue is wet and tainted white. The stomach is of correct form, soft, unpainful. The Ortner syndrome is positive on the left and on the right. Gastric motility is not disordered. The liver is not enlarged. The spleen is not palpable. No vomiting, the stool is formed and regular. The patient's conduct is tranquil, the patient is cooperative, sensitivity is not impaired. Speech is distinct. Eye pupils are standard, OD = OS, quick reaction to light. Meningeal symptoms are negative. Focal symptoms are absent. Coordination is not impaired. The urogenital system: no abnormalities. Negative costovertebral tenderness on both sides. 1. Examination. 2. Cold. 3. Hospitalization from FBU IZ 77/1 to special purpose hospital, no aggravation during transportation...”

**1.6. From the photocopy of the ambulance call card, Order No. 911 904253 (Volume 3, page 210)** it follows that: “...Date: November 16, 2009. Call received: at 19:30 p.m... Arrived to the place of call: 20:00 p.m. Returned: at 22:05 p.m.

Diagnosis: the patient died before the arrival of the team...

Arrival to the gates of the facility: 20:00 p.m. Access to the facility territory: 20:00-21 .. min (illegible). On arrival to the medical department of the facility the ambulance team was advised that the patient had died. The case reported to the Chief medical officer of the operational department. The patient died before the arrival of the ambulance ...”

**1.7. From the opinion of the expert commission of 23 November 2010 No. 323/z, Federal State Institution “State Research Center for Social and Forensic Psychiatry named after V.P.Serbysky” of the RF Ministry of Health and Social Development with regard to S.L.Magnitsky** it follows that: “...the forensic psychiatric experts arrive at the conclusion that in



accordance with papers submitted, S.L.Magnitsky did not suffer from mental disorders in life till 07.00 pm 16.11.2009 (answer to question No. 1) which is proved by medical records and testimonies of other people who produced evidences that Magnitsky had no symptoms of a mental disease, showed up stable social adaptation and abilities to fulfill his potential and control behavior both in routine conditions and in the pretrial detention center which is also supported by his written notes in the indicated period.

To clearly answer the question whether S.L.Magnitsky had a temporary psychiatric disorder on 16.11.2009 from 07.00 pm till he died is impossible due to lack of information available with the experts and inconsistency thereof (answer to question No. 2).

So, according to the psychological analysis of the submitted materials of the criminal case, it may be concluded that during the period of imprisonment, confinement in the Butyrskaya Prison with aggravation of the incarceration conditions, in result of subjectively invincible obstacles for the goal achievement (change of the measure of restraint) S.L.Magnitsky experienced intense emotions in response to stressful circumstances resulting in aggravation of the somatic state. It was steady enough to give rise to the frustration that became evident and distinct during the period from 13.11.2009 to 16.11.2009, as a combination of extreme oppression, disappointment, perplexity, resentful objection and indignation to the court and investigation actions (answer to question No. 3).

Answer of the medical psychologist to the raised question:

2. During the period of confinement in Butyrskaya Prison S.L.Magnitsky experienced intense emotions that became steady and resulted in frustration, which became evident and distinct during the period from 13.11.2009 till 16.11.2009...”

**1.8. From the xerox copy of Expert Opinion No. 555/10 (the repeated additional medical forensic examination) of FGU Russian Center of Forensic Medical Examination of the Ministry of Healthcare and Social Development of the Russian Federation** it follows that: “...3. Laboratory and special examinations. 3.1.1. Histological Examination.

The examination was carried out at the Russian Academy of Medical Sciences Scientific and Research Institute of Human Morphology.

There is a number of acute and chronic deviations discovered in the heart. The acute deviations include: the extended fragmentation of the muscle fiber in combination with the contraction damages, massive defragmentation of cardiac myocytes), the focal myolysis, and the undulating deformation of the muscle fiber. The above changes were combined with the microcirculation disorders in the form of the hypostatic plethora in the capillary vessels and the veins. Alongside with that there are obvious chronic changes including the fine-focal and perivascular sclerosis and lipomatosis of the myocard stroma, epicardium steatosis, sclerosis of the microvessel walls. The cardiomyocyte sarcoplasm is marked to have the increased accumulation of the lipofuscin grains.

Besides the acute venous plethora the lungs are marked to have the focal alveolar oedema as well as the signs of the venostasis accompanied with the picture of the violent induration: acute thickening of the alveolar partitions and accumulation of the siderophags in them.

The liver has definite signs of chronic active hepatitis with massive inflammatory-cellular infiltrates consisting of lymphocytes, macrophagocytes, segmental leukocytes, plasma cells; with dystrophy of hepatocytes, and with the abnormalities in the frame structure.

In the kidneys: there is an apparent dystrophy of the convoluted tubule epithelium, the glomerules have sclerosis of the basic capillary membrane, sclerosis of the mesangium, and sclerosis of the renal medulla.

In the pancreas: the apparent manifestation of lipomatosis; periductal sclerosis. The Langerhans islets are atrophic – of reduced size; with low content of the endocrine cells.

In the brain there is the plethora, cerebral tissue hypostasis, diapedetic blood effusions, and irregular manifestations of meninx vasculosa sclerosis.

### Opinion:

The results of the autopsy and the histological examination of the organs received on the basis of the autopsy provide the ground for forming the opinion that pro vita S.L. Magnitsky was suffering from recurrent cardiac myopathy during the period of time which may be determined only approximately, i.e. not less than for half a year or longer.

The immediate cause of the death was the cardiac failure caused by the fibrillation of the heart ventricle myocardium (which morphologically shows itself as the muscle fiber fragmentation). The commission also determined the signs of the chronic left heart ventricle insufficiency in the form of the chronic venostasis in the lesser circulation circuit with the developing violent induration picture. It is not excluded that the heart pathology could up to a certain time run silently and was compensated by the organism. The acute fibrillation of the heart ventricles could be provoked by the psychic and emotional stress and/or by the physical exertion.

The cardiac myopathy reason may be regarded as follows. There are certain data testifying to the effect that the cardiac myopathy developed on the basis of the running diabetes mellitus. The pancreas was found to have the apparent atrophic changes: lipomatosis; periductal sclerosis, and what is especially important - the Langerhans islet cell atrophy. The above gives the ground for assuming based on the morphological data the presence of diabetes mellitus even though there is no clinic or medical background data testifying to such presence in the materials of the case. The determined typical for diabetes mellitus impairment of the kidney glomerules (the basic capillary membrane sclerosis, the mesangium sclerosis), the renal medulla sclerosis and the extensive sclerosis of the microcirculation blood vessels also testify to such possibility. And finally the chronic active hepatitis which Magnitsky was found to have could also play its role in cardiac myopathy development. All the above mentioned details provide the ground for saying that S.L. Magnitsky had secondary cardiac myopathy of the mixed genesis.

The chronic active hepatitis should be regarded as the second concurring disease which aggravated the patient's condition and could play its role in tanatogenesis by creating the general unfavorable intoxication background for the heart function.

### 3.2. Electrocardiogram examination

Electrocardiogram dated October 21, 2009 is examined in the Russian Academy of Medical Sciences Cardiovascular Surgery Scientific and Research Center named after A.N. Bakulev.

The Rhythm is of sinus type and regular. The electrical axis of the heart is normal. The heart rate is equal to 66 heartbeats per minute.  $PQ = 0.12''$ ,  $QRS = 0.08''$ ,  $QT = 0.39''$ .

There is no data testifying to the organic pathology of the heart. There is no data testifying to the ischemic heart disease, dilated cardiac myopathy, and myocarditis.

There are no signs of potential heart rhythm disturbance.

### 3.3. X-ray image examination

Electrocardiogram dated October 21, 2009 is examined in the Russian Academy of Medical Sciences Cardiovascular Surgery Scientific and Research Center named after A.N. Bakulev.

The lungs on the X-ray images dated January 20, 2009 and July 10, 2009 are without abnormalities, and are aeriform. The lung roots are not expanded and do not have infiltration changes. The pleural recesses are clear. The heart is not enlarged. The cardiothoracic ratio is under 40 %. The heart outlines are distinct. The aortas are without abnormalities. The cupula of the diaphragm are in the typical place, and have no changes.

Conclusions. On the basis of the conducted examinations we arrive to the following conclusions:

The answer to the question:

1. During what period did the main disease from which Magnitsky suffered and which led to his death – the secondary dilated cardiac myopathy - develop?

S.L. Magnitsky's death caused by a number of concurrent diseases:

- the secondary dismetabolic cardiac myopathy with the underlying diabetes mellitus;

- the chronic active hepatitis,  
Aggravated with the fibrillation of the heart ventricles with the development of the acute heart insufficiency, cerebral edema, and pulmonary edema with the acute interalveolar and subarachnoidal blood effusions.

Concomitant diseases:

- arteriosclerosis;
- coarctating atherosclerosis of coronary arteries (arterial lipidosis);
- chronic calculous cholecystitis;
- chronic indurative pancreatitis;
- the left-side osteochondrosis of thoracic spine with the nerve-root pain syndrome per the type of the intercostal neuralgia;
- steatosis of the 1<sup>st</sup> to 2<sup>nd</sup> degree.

The reason of Magnitsky's death is confirmed with the following data testifying of the presence of the secondary dismetabolic cardiac myopathy:

-the morphologic macroscopic data:

- a. - moderate hypertrophy of heart with the moderate dilation of the cavities and fat accretion under the epicardium;
- b. - moderate dystrophy of myocardium (soft texture myocardium, the dark-red color with the uneven yellow shade, dull);

- the morphologic microscopic data:

- c. the muscular fiber fragmentation areas (the sign of the ventricle fibrillation);
- d. fine-focal and perivascular sclerosis;
- e. lipomatosis of the myocard stroma;
- f. microvessel wall sclerosis;
- g. the increased rate of accumulation of lipofuscin grains in the cardiomyocyte sarcoplasm;
- h. anisomorphism of cardiac myocytes;
- i. the loss of the cross striation;
- j. focuses of heavy contractures and large focuses of cardiac myocytes fragmentation;
- k. tortuosity of the cardiac myocytes.

The reason for S.L. Magnitsky's death is confirmed with the following data testifying of the presence of the chronic active hepatitis:

- the clinic data:

- l. the development a few hours before the death of an acute psychosis with the hallucinations;
- m. the medical background data which are found in the letters: the dull pains in the right-side hypochondrium (for instance the ones described in the letter dated July 19, 2009);

- the morphologic macroscopic data:

- n. the yellow and brown color of the liver surface;
- o. the yellow and brown color of the liver at its cross-section;

- the morphologic microscopic data:

- p. the focal mixed infiltration of the portal ducts going far out of the terminal plate represented by both the lymphoid and the polymorphonuclear cell elements;
- q. the focal discomplexation of the hepatocyte tubules,
- r. gyaline drop dystrophy and the piecemeal and bridging necrosis of hepatocytes;
- s. hepatic steatosis.

The dismetabolic type of the cardiac myopathy Magnitsky had is confirmed by the following morphologic microscopic data found during:

- examination of the heart:

- t. unevenly manifested hypertrophy of the cardiac myocytes;
- u. focal perivascular sclerosis;

- v. lipomatosis of the myocard stroma;
- w. lypofuscinosis;
- examination of the pancreas:
  - x. the availability of the chronic indurative pancreatitis signs;
  - y. the availability of the diabetes mellitus signs (hyalinosis of the basic membrane of the capillary vessels, sclerosis and hyalinosis of mesangium);
- examination of other organs and systems:
  - z. the presence of the chronic active hepatitis;
  - aa. meninx vasculosa sclerosis.

The chronic active hepatitis which S.L. Magnitsky had appeared no later than one month prior to the patient's death which is confirmed by the following data:

- the medical background data which are found in the letters: the dull pains in the right-side hypochondrium (for instance the ones described in the letter dated July 19, 2009);
- the morphologic macroscopic data testifying that the disease continued for the time not less than approximately one month.

The secondary dismetabolic cardiac myopathy which S.L. Magnitsky had developed not later than six months prior to the patient's death which is confirmed by the available morphologic microscopic data.

The fact that S.L. Magnitsky had diabetes mellitus is confirmed by the available morphologic microscopic data:

- the acute Langerhans islet cell atrophy concurrent with the lipomatosis and the periductal sclerosis of the pancreas tissues;
- the impairment of the kidney glomerules (sclerosis of the basic capillary membrane, sclerosis of the mesangium), sclerosis of the renal medulla and the extensive sclerosis of the microcirculation blood vessels.

The steatosis of the 1<sup>st</sup>-2<sup>nd</sup> degree is confirmed by the mass of S.L. Magnitsky's body which registered in his medical record which made 105 kg at the patient's body height of 185 cm (as was registered in course of the forensic examination of S.L. Magnitsky's dead body) or 181 cm. (as was registered in his medical record).

The answer to the question:

2. What was the reason (the reasons) for S.L. Magnitsky's developing the secondary dilated cardiac myopathy? Does the available documentation in the name of S.L. Magnitsky contain the data which provide the ground to assume that the patient developed the cardiac pathology after some contagious disease or toxic substance impact? If yes, then what was the duration of the impact of such factors and what contagious disease substance led to the development of the cardiac pathology or what active substance provided the toxic impact on the heart?

The reasons for S.L. Magnitsky's developing the secondary dismetabolic cardiac myopathy were as follows:

- diabetes mellitus;
- and chronic active hepatitis,

which is testified by the availability of the respective clinic and morphological changes.

In the presented materials there are no signs testifying to the contagious or exogenous toxic nature of the secondary cardiac myopathy Magnitsky was suffering from.

On the basis of the provided materials it is not possible to determine the concrete length of the period during which the factor (factors) which caused the development of the secondary dismetabolic cardiac myopathy were exerting their influence on S.L. Magnitsky's organism.

The conducted examinations helped to determine the cardiac myopathy Magnitsky had to be of the secondary dismetabolic but not of the dilated type.

The answer to the question:

3. Is there a relationship between S.L. Magnitsky's developing the primary disease and the fact that he also had the concomitant diseases? During what period of time did the

concomitant diseases develop: the calculeous cholecystitis, the hepatic steatosis; the meninx vasculosa fibrosis, lipomatosis of aorta and its large branches, lipomatosis of the pancreas, the chronic active persisting hepatitis? What were the possible reasons for the development of the above mentioned pathologies?

There is a relationship between the occurrence and progressing of the secondary dismetabolic cardiac myopathy, diabetes mellitus, and the chronic active hepatitis Magnitsky was suffering from as the chronic active hepatitis and the diabetes mellitus were the aggravating factors; and it is most likely that they were the reason of S.L. Magnitsky heart disease progress.

It is not excluded that there was a relationship between the diseases S.L. Magnitsky suffered from in such a way such as:

- the chronic indurative pancreatitis may cause the aggravation of arteriosclerosis including of the coronary arteries arteriosclerosis;
- the diabetes mellitus may cause the aggravation of arteriosclerosis including of the coronary arteries arteriosclerosis;
- the steatosis may cause the development of hepatitis, diabetes mellitus, and, by means of accumulation of the epicardial fat (the presence of which was marked during the forensic examination of S.L. Magnitsky's dead body) it may also cause the development of cardiac myopathy.

The chronic active hepatitis S.L. Magnitsky suffered from appeared not later than one month prior to the patient's death which is confirmed by the following:

- the medical background data which are found in the letters: the dull pains in the right-side hypochondrium (for instance the ones described in the letter dated July 19, 2009);
- the morphologic microscopic data testifying that the disease continued for the time not less than approximately one month.

S.L. Magnitsky began suffering from the chronic calculeous cholecystitis not later than July 2009 which is confirmed by the data available from the ultrasonic investigation of the abdominal cavity organs dated July 1, 2009 (stiffening of the walls, availability of multiple calculi).

The hepatic steatosis is one of the morphologic proofs that S.L. Magnitsky had active hepatitis and is not an independent disease.

The meninx vasculosa fibrosis S.L. Magnitsky had is not an independent disease either and may be regarded as the manifestation of the traumatic brain injuries, infections of the brain and brain lining.

The lipomatosis of aorta and its large branches S.L. Magnitsky was observed to have is regarded to be the sign of arteriosclerosis, i.e. the sign of the systemic disease, specifically of atherosclerosis the progress of which was enhanced by the diabetes mellitus.

The chronic pancreatitis S.L. Magnitsky was suffering from morphologically manifested itself, including other features, by the availability of lipomatosis and sclerosis of the pancreas tissues. The chronic pancreatitis S.L. Magnitsky had started not later than in July 2009 which is obvious from the data of the ultrasonic investigation of the abdominal cavity organs dated July 1, 2009 (increased size of the pancreas).

The fact that S.L. Magnitsky had microscopic signs of the impairment of the pancreas (acute Langerhans islet cell atrophy combined with the lipomatosis and the periductal sclerosis of the tissues), and the blood vessels (impairment of the kidney glomerules (sclerosis of the basal capillary membrane, sclerosis of the mesangium), sclerosis of the renal medulla and the extensive sclerosis of the microcirculation blood vessels testify to the effect that the diabetes mellitus he had was developing during the period of not less than a few months. It does not seem feasible to determine the diabetes mellitus S.L. Magnitsky had development period more accurately.

The answer to the question:

4. Did S.L. Magnitsky during the period from November 24, 2008 till November 16, 2009 have any evident signs forming the clinic picture of cardiac pathology (chronic/acute heart insufficiency)?

There is no objective medical data testifying to the effect that S.L. Magnitsky had chronic or acute heart insufficiency during the period from November 24, 2008 till November 16, 2009.

The answer to the question:

5. Do the results of the instrument tests of S.L. Magnitsky's body, specifically in the electrocardiogram dated October 21, 2009 and X-ray images (photofluorograms) dated January 20 and July 10, 2009 include the data testifying that he had dilated cardiac myopathy? In particular, does the electrocardiogram dated October 21, 2009 of S.L. Magnitsky's heart reveal the signs of the left ventricle myocard hypertrophy; and do the X-ray images (photofluorograms) dated January 20 and July 10, 2009 reveal the signs of the acute expansion of the heart cavities?

The provided results of the electrocardiogram dated October 21, 2009 and X-ray images (photofluorograms) dated January 20 and July 10, 2009 do not reveal the signs of dilated cardiac myopathy or the signs of the secondary dismetabolic cardiac myopathy.

The provided S.L. Magnitsky's electrocardiography results dated October 21, 2009 does not reveal the signs of the left ventricle myocard hypertrophy.

The provided X-ray images (photofluorograms) dated January 20 and July 10, 2009 do not reveal the signs of the heart cavities subitaneous expansion.

The answer to the questions:

6. By what legislative instruments are the standards applicable in Russia with regard to the medical assistance fixed; are they compulsory for the abidance by the doctors who work at the Russian Federal Penitentiary Service institutions?

7. What are the medical assistance provision standards in case of the diagnosed dilated cardiac myopathy? What must be the sequence of the doctor's actions in the event if the above mentioned disease is diagnosed?

The questions are of theoretical nature and in such connection the answers to them lie beyond the competence of the expert commission.

The answer to the question:

8. Were there any shortcomings in the provision of the medical help allowed by the doctors of Federal Penitentiary Service (UFSIN for Moscow) Detention Center IZ-77/ 1 and Federal Penitentiary Service (UFSIN for Moscow) Detention Center IZ-77/2 who were providing the supervision and treatment to S.L. Magnitsky. If yes, then by whom were such shortcomings allowed; and what was their substance and were they in causative connection (under the character of the cause) with S.L. Magnitsky's death?

In course of provision of the medical assistance to S.L. Magnitsky the following shortcomings were allowed:

1. In case of the complaints of the dull pains in the right hypochondrium as well as of the pains in the epigastrium, sickness, vomiting it was necessary to carry out:

- the general clinic blood test;
- the general clinic urine test;
- the biochemical blood test including for the enzymes and lipase;
- the test of urine for diastatic enzyme;
- the ultrasound examination of the abdominal cavity organs (was carried out on July 1, 2009; revealed the signs of the chronic pancreatitis, calculeous cholecystitis, as well as the moderately increased echogenity of the liver pulp);
- the blood test for the hepatitis markers.

The above listed measures had not been carried out (besides only one of them which was the ultrasound investigation of the abdominal cavity organs); their implementation could be ministerial to the timely revealing by the diagnostics of the chronic active hepatitis and the diabetes mellitus which Magnitsky was suffering from.

2. In case of Magnitsky's complaints of the pains in the area of the heart radiating into the area of the back (which were denoted by him in the letter on August 23 and 24, 2009) it was necessary to carry out:

- the additional electrocardiographic examination (electrocardiographic examination was carried out only once, on October 21, 2009 and there was no pathology revealed at that time);
- X-ray examination of the intrathoracic organs (the intrathoracic organs examination was carried out on October 21, 2009 and July 10, 2009, and there was no pathology revealed); the biochemical blood test;
- the echocardiographic examination (it seems most likely that no pathology would have been revealed, however it is not excluded that there could have been revealed a slight increase of the heart size).

The above listed diagnostic measures were partially carried out. It is necessary to note that their full implementation would not have been able to guarantee revealing the cardiac myopathy which was diagnosed post mortem mainly based on the microscopic examination data and on the minimum macroscopic changes.

3. There wasn't a timely and adequate treatment prescribed for the diseases which S.L. Magnitsky had and which served to be the cause of his death:

- the course of treatment required in case of the chronic active hepatitis should have included the prescription of:

- bb. hepatoprotectors (for example, legalon or carsil);
- cc. pancreatic enzyme preparations (for example, pansinorm);
- dd. antiulcer preparations (for example, de-nol, bisnol);
- ee. corrective diet (Diet no. 5).

- as S.L. Magnitsky did not have the clinic manifestations of the secondary dismetabolic cardiac myopathy (such as the respiratory distress and oedema) there were no indications for the prescription of the respective therapy.

4. At suspicion that S.L. Magnitsky may be suffering from the diabetes mellitus which first appeared on November 13, 2009 it was necessary to carry out:

- the general clinic blood test;
- the general urine analysis;
- the biochemical blood test including with determining of the glucose level;
- glucose tolerance test.

The above listed measures had not been carried out, however their implementation could be ministerial for revealing by diagnostics of the diabetes mellitus S.L. Magnitsky was suffering from.

5. There was no adequate therapy applied when S.L. Magnitsky's condition took an obvious sharp turn to the worse at approximately 19:00 on November 16, 2009 and he became inadequate, excited, disoriented, started talking to the "voices" and had heart fibrillation, specifically:

- the sedative therapy (administering aminazin intramuscularly);
- the infusion therapy (for instance, solutions of albumin and plasma);
- heart stimulating therapy applied at the development of heart fibrillation (defibrillation, - intracardiac injection of the adrenaline under the electrocardiographic supervision).

The implementation of all the above listed diagnostic measures would have allowed to timely diagnose the diabetes mellitus and the chronic active hepatitis S.L. Magnitsky was suffering from and prescribe the adequate treatment which could have prevented the progress of the above diseases and, respectively, of the secondary dismetabolic cardiac myopathy and avoid the marginal outcome, i.e. of the patient's death on November 16, 2009.

The failure to implement of the above listed measures deprived S.L. Magnitsky of the benign outcome chance.

Thus the shortcomings in the provision of the medical assistance to S.L. Magnitsky are regarded to be in direct causative connection with the ensuing of the marginal outcome, i.e. of the patient's death.

Investigation with regard to who specifically allowed the shortcomings to take place during the provision of the medical assistance to S.L. Magnitsky is beyond the competence of the expert commission.

The answer to the question:

9. Were there any violations of the special legislative instruments which fix the procedure for rendering the medical assistance to the patients held in detention allowed by the doctors or other administrative personnel of the same above mentioned detention centers? If yes, then who were the violations allowed by, what did they consist in, and were they in any causative connection (under the character of the cause) with the marginal outcome, i.e. with the patient's death.

Examination of the provisions of the legal instruments which fix the procedure for rendering the medical assistance to the patients held in detention, as well as the investigation with regard to who the violations were allowed by Magnitsky is beyond the competence of the expert commission.

The answer to the question:

10. Is it possible on the basis of the collected materials (including the medical documentation, medical expert opinion and examination results; the testimony provided by the witnesses and other results of the investigation activity) to accurately determine the time and, correspondingly, the place of S.L. Magnitsky's death. If yes then where and when did the clinical and the biological death of the patient take place?

The presented materials provide contradictory data with regard to the exact time of S.L. Magnitsky's death: the medical record entry registers the exact time of S.L. Magnitsky's biological death to be at 21 hours 50 minutes; however the ambulance call card registers the time to be 21 hours 20 minutes.

As neither the medical record nor the ambulance call card specify the grounds based on which the death was certified, or the dynamics of the expiration process, as well as there are no data on the frequency of the pulse, its special characteristics, about the arterial pressure, about the signs which served as the reason to start the resuscitation measures (besides the certification of the loss of consciousness) it does not seem possible to determine the exact time of the occurrence of the clinical and the biological death of S.L. Magnitsky.

The answer to the question:

11. Were the mental disturbance signs which S.L. Magnitsky started showing shortly before the death also the principal disease development symptoms or the symptoms of the progress of the concomitant diseases?

The sharp turn to the worse, inadequate behavior, excitement, disorientation, talking to the "voices" which S.L. Magnitsky started to show at approximately 19 hours 00 min. on November 16, 2009 could be both the signs of the secondary dismetabolic cardiac myopathy progress and the result of the response reaction to the psycho-traumatic impacts which developed on the basis of the emotionally charged feelings with the underlying brain edema as well as the result based on other reasons.

The answer to the question:

12. Could the injuries found on S.L. Magnitsky's body in the form of the abrasions on the dorsum of the left hand in the area of the basidigital bone of the fifth finger, the ecchymoma on the dorsum of the left hand in the area of the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> fingers basidigital bone condilus, and the abrasions on the surface of the left lower leg which occurred shortly before his death as the result of the impact and sliding of the blunt heavy object have been caused during the performing by the patients of the actions which were assessed by the witnesses as the mental disturbance (in particular in course of hitting the wooden day-bed against the metal bars of the



box)? Is causing of such injuries entirely excluded in cases when the special equipment such as the handcuffs and the rubber truncheon are used?

13. Could the injuries found on S.L. Magnitsky's body in the form of the abrasions on the right and left upper limbs in the area of the wrist joints, and the abrasions with the underlying ecchymoma in the area of the right and left wrist joints which appeared shortly before his death as the result of the impact of the compressing and sliding blunt hard object or objects with the limited injuring surface be caused due to applying of special equipment such as the handcuffs? If yes, then what were the circumstances of the above mentioned special equipment applying (the tight fixing on the hands, an attempt to take off the handcuffs)?

During the forensic examination of S.L. Magnitsky's dead body the following injuries were detected:

- the circular ecchymoma in the area of the right wrist joint underlying the multiple linear horizontally oriented abrasions;
- the circular ecchymoma in the area of the left wrist joint underlying the multiple linear horizontally oriented abrasions;
- two abrasions on left hand 5<sup>th</sup> finger basidigital bone dorsum;
- the ecchymomas of the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> left hand finger basidigital bone dorsum;
- the abrasion on left lower leg upper one third frontal surface;
- the ecchymomas on the internal surface in the area of the right leg ankle joint;
- the blood effusions into the soft tissues in the areas of the above listed injuries.

The injuries which S.L. Magnitsky had were caused resultantly from the traumatic application of the blunt hard object (objects) which is confirmed by the closed type of the trauma and their morphological manifestations in the form of the abrasions, ecchymomas, blood effusions into the soft tissues.

The places where the traumatic impact which caused the injuries S.L. Magnitsky were as follows:

- the area of the right wrist joint;
- the area of the left wrist joint;
- the dorsum surfaces of 2<sup>nd</sup> - 5<sup>th</sup> left hand finger basidigital bones;
- the frontal surface of the left lower leg upper one third of the frontal surface;
- the right leg ankle joint internal surface area

as is testified by the locale of the injuries and their morphological manifestations in the form of the abrasions, ecchymomas, and blood effusions into the soft tissues.

Some certain directions of the traumatic impacts which caused the injuries S.L. Magnitsky had were as follows:

- from back to forward (with the reference to the place where the traumatic force was applied on the dorsum surfaces of 2<sup>nd</sup> - 5<sup>th</sup> left hand finger basidigital bones);
- from front to back (with the reference to the place where the traumatic force was applied to the left lower leg upper one third of the frontal surface);
- from right to left (with the reference to the place where the traumatic force was applied to the right leg ankle joint internal surface area

as is testified by the locale of the injuries and their morphological manifestations in the form of the abrasions, ecchymomas, and blood effusions into the soft tissues.

The injuries S.L. Magnitsky had are caused as the result of not less than five impacts which is testified by the number of the locales where the traumatic force was applied in various anatomic areas.

The type of the traumatic impact which caused the injuries S.L. Magnitsky had was the stroke which is testified by the afferent direction of the traumatic impact as well as by the morphological manifestations of the injuries (such as the abrasions, the ecchymomas, and blood effusions into the soft tissues); the abrasions could result from the combination of the stroke and friction or only from the friction.

The morphological traits of the circular ecchymomas in the area of the right and left wrist joints, and of the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> left hand finger basidigital bone dorsum with the blood effusions into the soft tissues in the areas of the ecchymomas, specifically – the cyanotic purple ecchymoma color and with the oedema of the surrounding soft tissues as well as the dark red color and the glossy look of the blood effusions testifies to the effect that they were caused not more than 24 hours before S.L. Magnitsky's death occurred.

The morphological traits of the of the multiple linear horizontally oriented abrasions in the area of the left and the right wrist joints, the abrasions on the left hand 5<sup>th</sup> finger basidigital bone dorsum, the abrasion on left lower leg upper one third of the frontal surface with the blood effusion into the soft tissues which was specifically of red-brown color, dried up, and slightly lower than the level of the surrounding skin integument; as well as the dark red color and the glossy look of the blood effusions testify to the effect that they were caused not more than twenty four hours before S.L. Magnitsky's death occurred.

The morphological traits of the ecchymoma in the right leg ankle joint internal surface area with the blood effusion into the soft tissues in the ecchymoma area specifically its purple color with the greenish shade along the periphery as well as the sorrel color and the dry look of the blood effusion testify to the effect that they were caused approximately 3-6 days before S.L. Magnitsky's death occurred.

The determined mechanism of formation of S.L. Magnitsky's injuries testifies to the effect that the circular ecchymomas he had in the area of the right and left wrist joints with the located on their background multiple linear horizontally oriented abrasions had most probably formed due to the repeated traumatic impact of the blunt hard object (objects) with the limited injuring surface in comparison with the surface which was injured with the tangential direction of the traumatic impact such object being the handcuffs which is testified by:

- the circular type of the ecchymomas;
- the horizontal alignment and linear type of the abrasions with the underlying ecchymomas.

The determined mechanism of S.L. Magnitsky's injuries formation does not exclude the possibility that part of the injuries formed based on the traumatic impact of the rubber truncheon which is testified by the following:

- the injuries are caused through the impact of the blunt hard object (objects);
- the rubber truncheon is a blunt hard object.

Investigation of the circumstances under which the injuries were caused is beyond the competence of the expert commission.

Answers to the additional questions raised to the experts:

Answer to question

1. What may be the consequences for the life and health of the patient with the diagnosed pancreatitis, cholecystitis, cholelithiasis of the failure during the four months to provide him with the qualified medical assistance in respect of the above listed diseases?

The question is of a hypothetical nature and pursuant to that the answer to it lies beyond the competence of the expert commission.

Answer to question

2. What may be the consequences for the life and health of the patient with the diagnosed pancreatitis, cholecystitis, cholelithiasis of the failure to provide him with the scheduled surgical operation prescribed to him?

The question is of a hypothetical nature and pursuant to that the answer to it lies beyond the competence of the expert commission.

Answer to question

3. What objective conditions (personnel numbers, personnel qualification level, availability of the laboratory and instrumental diagnostics equipment) were available at Moscow Detention Center 77/2 (Butyrka Detention Center) during the period from July 25 to November 16 of the year 2009 for provision of medical monitoring of the patient with the diagnosed

pancreatitis, cholecystitis, cholelithiasis? What objective conditions were available for provision of qualified conservative as well as the surgical treatment of the patient with the above mentioned diseases under the conditions available in that Detention Center.

Examination of the “objective conditions (personnel numbers, personnel qualification level, availability of the laboratory and instrumental diagnostics equipment)” which are available at the above institutions for the “provision of qualified conservative as well as the surgical treatment of the patient with the above mentioned diagnosis under the conditions available in that Detention Center” is beyond the competence of the expert commission.

Answer to question

4. What may be the consequences for the life and health of the patient with the diagnosed pancreatitis, cholecystitis, cholelithiasis who is not being provided with the medical assistance for four months, and not provided with the required surgical if he is simultaneously deprived of the regular sleep during the night hours, hot meals, access to drinking water and hot water?

The question is of a hypothetical nature and pursuant to that the answer to it lies beyond the competence of the expert commission.

Answer to question

5. How far grounded were the actions of Detention Center 77/2 administration and medical personnel who left Magnitsky who approached for medical help in connection with the acute pains and vomiting and who had the diagnosed pancreatitis, cholecystitis, cholelithiasis without medical assistance for three days (from November 13 to November 16, 2009) and what injury to his health could such actions cause?

When on November 13, 2009 S.L. Magnitsky applied for medical assistance based on the complaints of the pains in the epigastrium and in the right-side hypochondrium with the radiation into the area of the back, the sickness and vomiting he was assigned for the anti-spasm therapy (drotaverine and papaverin), diet and cold to be applied to the abdomen; he was not submitted to any clinical examination including by means of employing the diagnostic equipment.

The analysis of the previous materials testifies that S.L. Magnitsky at the moment of his applying for medical assistance was suffering from the following diseases:

- the principal diseases:
  - ff. the secondary dismetabolic cardiac myopathy with the underlying diabetes mellitus;
  - gg. the chronic active hepatitis;
- the concomitant diseases:
  - hh. arteriosclerosis; atherosclerosis; coarctating atherosclerosis of coronary arteries (arterial lipidosis);
  - ii. chronic calculeous cholecystitis;
  - jj. chronic indurative pancreatitis;
  - kk. the left-side osteochondrosis of thoracic spine with the nerve-root pain syndrome per the type of the intercostal neuralgia.

The diagnosis made when S.L. Magnitsky applied for medical assistance on November 13, 2009 namely: cholelithiasis, chronic cholecystitis, chronic pancreatitis, acute condition was wrong as the diagnoses of the principle diseases which caused the death of the patient had not been determined.

The course of treatment given to the patient was not contrary to the indications but was not full even in terms of the made diagnosis.

Thus the shortcomings in the provision of the medical assistance to S.L. Magnitsky allowed including when he applied for the medical assistance on November 13, 2009 disagreed with his health condition and had a negative effect with regard to the status of the diseases he was suffering from.

Answer to question

6. What may be the consequences for the life and health of the patient with the diagnosis of acute exacerbation of pancreatitis, cholecystitis, cholelithiasis; with symptoms of acute pain and vomiting, with possible pancreonecrosis and closed craniocerebral injury of not providing

him with urgent medical assistance, isolating him of medical supervision, and keeping him bound him with the handcuffs to the day-bed on the floor of the solitary confinement cell for half an hour – an hour and a half?

The question is of a hypothetical nature and pursuant to that the answer to it lies beyond the competence of the expert commission.

Answer to question

7. What objective data/marks on the dead body could testify of the reanimation procedures such as cardiac pulmonary resuscitation applied to the patient who was unconscious and whether such marks were present on Magnitsky's body?

The provided materials do not include the objective morphological signs confirming or negating that S.L. Magnitsky was provided with the cardiac pulmonary resuscitation.

Answer to question

8. What medical examinations of the heart activity were provided to Magnitsky S.L. during the period when he was held in custody and what medical conclusions were made?

The answer to the present question requires special knowledge in the area of medicine; it may be received by means of examining the medical documents.

Answer to question

9. Is the term "cardiac pathology" of equal worth to the term "heart disease"?

The question is of a hypothetical nature and pursuant to that the answer to is beyond the competence of the expert commission.

Answer to question

10. Could the diagnosis stating "intercostal neuralgia" given to Magnitsky impede his transfer to another Detention Center?

The examination of the guidelines concerning the indications contrary to transfer to another Detention Center lies beyond the competence of the expert commission.

Answer to question

11. Could the diagnosis stating "intercostal neuralgia" influence the direction of further S.L. Magnitsky's treatment and could it alongside with that testify of the symptoms of the deterioration of health which led to the death of the victim?

The question "Could the diagnosis stating "intercostal neuralgia" influence the direction of further S.L. Magnitsky's treatment" is of a hypothetical nature and pursuant to that the answer to is beyond the competence of the expert commission.

S.L. Magnitsky's death was caused by the concomitant diseases:

- the secondary dismetabolic cardiac myopathy underlied by the diabetes mellitus;
- the chronic active hepatitis,

Aggravated by the ventricle fibrillation with the development of the acute cardiac myopathy, the edema of the brain and lungs with the acute intraalviolar and subarachnoidal blood effusions..."

## 2. Examination of the medical documents

### 2.1. From the medical record of medical outpatient No. 17 provided by Diagnostic and Treatment Center "Ideal" for the name of S.L.Magnitsky it follows that:

"...examination by the ENT specialist on 15.08.1988 – diagnosis: bilateral chronic maxillary sinusitis..."

Eye specialist examination on February 4, 1993 - fundus of the eye: discus nervi optici is pale pink, with distinct borders. The vessels are of normal size and passage...

Examination on February 4, 1993 - complaints of the headaches, giddiness, weakness, nausea. On February 4, 1993, at about 08:40 a.m., in his house entrance he slipped and fell hitting down with his head, lost consciousness for a short time, vomited, attended for emergency help by an ambulance which took him to the City Clinic Hospital (GKB). Was examined by the

neurosurgeon in the reception ward, craniogram without pathema. Diagnosis: brain concussion, recommended treatment to be taken on an out-patient clinic basis.

The ambulance document on transfer of the patient dated February 04, 1993: on the skull X-ray image there are no visible bone trauma caused changes of the cranial vault determined. Intensification of the vascular pattern and the convolitional markings.

Neurosergion examination on February 4, 1993 – clinic brain concussion. Should be treated at home under the supervision of neurologist:

Eye specialist examination on February 10, 1993 – OD/OS=05/09 – 1.0= 1,0/1,0; discus nervi optici is pale pink, the blood vessels are unchanged.

Abstract from the inpatient medical record – injury on 04.02.1993, admitted on February 11, 1993, discharged on February 25, 1993. Diagnosis: Closed craniocerebral injury. Medium severity brain contusion. Linear skull roof and base fracture. Injury after fall. The patient lost consciousness and vomited. At the time of admission to the Neurosurgical Department the patient's condition is satisfactory. Physically there are no abnormalities. Neurological status: general brain and light meningeal symptomatology, VII, XII nn. S., Ng expressed. Disordered statics, anisoreflexia, vegetal lability. The skull R-gram: linear fracture of the frontal bone on the right towards the base of the anterior cranial fossa. Echoencephalography: no Me deviation. Treatment... Discharged in a satisfactory condition, after considerable improvement, to be attended by the neurologist...

Examination on March 5, 1993 – approached with the complains of the headache, pains at the base of the neck, increased fatigability. The medical background includes brain concussion (with the retrograde amnesia). Since that time is disturbed with the pains in the right temporal region and at the base of the neck. The pains are of constricting type and are related to long time sitting and mental strain; periodically suffers from the pains in the right side of the neck. Objectively – a restricted and painful rotation of the head to the right. The occipital muscle points of insertion are very painful. There are active trigger points in the trapezius muscle and in the clavisternomastoid one with the radiation to the right temporal region and the eyesocket. Unit C0-C1 on the right. Diagnosis: cranialgia, extravertebral myotonic syndrome with the underlying servical spine osteochondrosis. The subsequent effect of the trauma. Therapy includes: manual therapy, laser reflex therapy, trigger area blocking measures, isometric relaxation.

Examination on 31.03.1993 - tThe patient states 50% effectiveness. Headaches are less often... Recommended: trental 2 tablets 3 times a day (10 days)...

Abstract No. 20445 of September 3, 1996 from Municipal Clinical Hospital No. 33 named after Professor A.A. Ostroumov, date of admission: August 27, 1996, date of discharge: August 3, 1996 (*looks like a mistake, probably they meant 03.09.1996 – note by the expert commission*). Diagnosis: acute destructive appendicitis. Delivered to the Surgical Unit with a clinical picture of acute appendicitis. Urgent operation of acute destructive appendicitis, appendectomy. Post-surgery period without complications. The wound healed with a primary adhesion..."

Protocol of the X-ray examination of the thorax, dated December 22, 2004 – the X-ray images made in three standard dimensions show the lungs without any local or infiltrative carnifications. The roots of the lungs are not expanded. Pleural recesses are unimpeded. The respiratory diaphragm is aligned in the normal way. The left ventricle of the heart is moderately enlarged, the aorta is without abnormalities.

**2.2. From the patient's medical case record without number maintained at Detention Center 77/5 (FGU IZ-77/5) in the name of S.L. Magnitsky** it follows that: "...the examination of the patient carried out by the medical officer on duty: the standing height is 181 cm; the weight is 105 cm; the skin integument is clean; sanitary processing accomplished; pediculosis – abs.; tuberculosis; common-source hepatitis, HIV infection, lues venereal –

negative. There were no bodily injuries discovered at the moment of the examination. Diagnosis: apparently healthy.

Examination on March 16, 2009 – approached with the complaints of weakness, cold in the head, throat irritation, cough, headache. Moderately grave condition. Hyperemia of pharynx. The respiration in the lungs is vesicular, without stertor. The cardiac sound is clear and of regular rhythm, the heart rate is equal to 80 heartbeats per minute. The arterial blood pressure is 130/90 mm of mercury column. The body temperature is 37.7 °C. The abdomen is relaxed, bowel movement without abnormalities. Diagnosis: a. nasopharyngitis. Aspirins: 1 tablet twice a day; bromhexine: 1 tablet three times a day; furacilin for washing the throat; a one-time injection of 2 % analgin solution intramuscularly...

Examination on March 19, 2009 – diagnosis: acute nasopharyngitis. The body temperature is 36.6 °C. Handed out: bromhexine, pectusin No. 5...

Examination on March 23, 2009 – diagnosis: acute nasopharyngitis, recovery. Polyvitamins...

Examination on April 28, 2009 – no complaints, the skin integument is clean. The abdomen is relaxed, bowel movement without abnormalities; pediculosis, and psora are not discovered, disaffirms the contact with contagious patient; sanitary processing accomplished. Approved for the reassignment.

Examination on May 14, 2009 – a call to the ward at 11:30; complains of the pains in the back with the radiation to the heart area on the left side and to the stomach area on the right side; the pain is of acute terebrating type, appears at full inspiration. Arterial blood pressure is 130/80 mm of mercury column. The body temperature is 36.2 °C.

The medical background includes: osteochondrosis and neuralgia, the patient had similar attacks before which were removed by taking the analgesic medicines. Has been suffering from that disease for approximately 2 years. The skin is clean, humid. The cardiac sound is clear and of regular rhythm. The heart rate is 94, tachycardia. The respiration is without the stertor. The tongue is humid. The GIT is without abnormalities. On the examination by touch there is pain in the paraspinal points at Th 90-10-11. The pain in the intercostal space no. V, along the run of the intercostal nerve, on the left side. During the chest excursion the pain grows stronger. Diagnosis: osteochondrosis of the spine with the root-pain syndrome per the type of the intercostal neuralgia on the left side, definitely intensive. Therapy: ketorol solution 0.1 – one-time injection, to be administered intramuscularly; spasmolgon tablets: 1 tablet twice a day, to be taken for 5 days; tempalgyn tablets: 1 tablet in the evening, to be taken for 5 days; diclofenac tablets: 100 mg, 1 tablet a day, to be taken for 17 days until May 29, 2009; diclofenac cream 1 tube...

Examination on May 20, 2009 – the patient notes the improvement of his condition. Prescribed: to continue the same therapy for 5 days + ketanov: 1 tablet three times a day, to be taken for 5 days; 1 tube of diclofenac cream– to be applied locally...

Examination on May 25, 2009 – the therapy is over; recovery...

Examination on July 1, 2009 – complaint of the belt-type pains in the area of the left-side hypochondrium. According to the patient, there is a pancreas disease in the medical background. It is recommended to do the ultrasound investigation of the pancreas.

The ultrasound investigation of the abdomen organs dated July 01, 2009 – liver: has an even and distinct outline, dimensions: the right-side hepatic lobe, vertically: 135 cm (*evidently, it means 13.5 cm – the comment made by the expert commission*); left-side hepatic lobe, front/back: 81 cm (*evidently, it means 8.1 cm – the comment made by the expert commission*); the lobes are not increased; the parenchyma is of the increased echogenicity and of the homogeneous structure. Wirsung's duct is 1 mm. The spleen size is 102x48 cm (*evidently, it means 10.2x4.8 cm – the comment made by the expert commission*). Inference: echosigns of the pancreatitis and calculous cholecystitis...

Examination on July 2, 2009 – taking into account the results of the ultrasound investigation as of July 1, 2009 the prescription is as follows: baralgyn: 1 tablet 3 times a day, to be taken for 7 days; mesim: 1 tablet 3 times a day, to be taken for 7 days...

Examination by the surgeon on July 13, 2009 – complaints of the periodic belt-type pains in the epigastrium, heavy feeling in the right-side hypochondrium. Has been ill for a long time. The ultrasound investigation revealed the disease of GIT. The abdomen is relaxed, not swollen, examination by touch reveals pains in all its parts. Symptoms of peritonitis are not observed. The bowel movement and the diuresis are normal. Diagnosis: cholelithiasis, chronic cholecystopancreatitis. Recommended: verification ultrasound investigation one month later; scheduled surgical operation. Drotaverine: 1 tablet 3 times a day. Cerucal: 1 tablet 3 times a day.

Examination on July 18, 2009 – examination during the inspection round: complaints of the pains in the epigastrium. The heart and the lungs are normal. The abdomen is moderately swollen, pain in the projection of the gall bladder and in the anticardium. Diagnosis: cholelithiasis, chronic cholecystopancreatitis. Therapy: mesim-forte: 1 tablet 3 times a day; drotaverine: 1 tablet 3 times a day until August 1, 2009.

Examination on July 24, 2009 – the sanitary processing (of the patient) is accomplished in full scope. The skin integument is clean, the abdomen is relaxed. The bowel movement is normal. Did not have any contact with the contagious patients. No complaints. Diagnosis: practically healthy. Approved for the reassignment.

Examination on July 25, 2009 – denies lung tuberculosis, dysentery, venereal diseases. There are no obvious signs of venereal diseases available. There are no bodily injuries discovered during the medical examination. At the moment of examination there are no complaints provided. The body temperature is normal; the arterial blood pressure is normal...

Examination on October 7, 2009 – Diagnosis: cholelithiasis. Chronic cholecystopancreatitis. Osteochondrosis of thoracic spine with the nerve-root pain syndrome by the type of the intercostal neuralgia. Transfer to the 3-rd Therapeutic department with the purpose of examination and assigning of the therapy...

Examination by the surgeon on duty on November 16, 2009, at 18:30 – Diagnosis: acute cholecystopancreatitis? Hospitalization to the surgical department for the dynamic supervision...

Examination by the surgeon on duty on November 16, 2009, at 19:00 – the patient displays inadequate behavior. Talks to a “voice”, is disoriented. He yells that someone wants to kill him. The condition is assessed to be the acute psychosis, the “03” ambulance is called for, order No.: 904253. There are no bodily injuries with the exception of the marks from the handcuffs on both wrists...

The abstract from the medical case record (without number or date): is under the supervision in the therapy department of Federal Penitentiary Service (UFSIN for Moscow) Detention Center 77/2 with the following diagnosis: cholelithiasis, exacerbation of cholecystopancreatitis. The medical background: considers himself sick as of March 2008 when the above mentioned complaints appeared. Was hospitalized to State Clinical Hospital (GKB) No. 36 where he was examined with the determined diagnosis: cholelithiasis, chronic pancreatitis, calculeous cholecystitis. Receives the following treatment: pansinorm Forte; nitrosorbidum, drotaverine, phospholugel; allocholium. At present provides the complaints of acute belt-type pains, vomiting every three hours. Objectively: moderately grave condition. The skin integument and the visible mucous lining are clean, moderately humid, and cool to the touch. There is no peripheral oedema observed. The lymphaglands are not visible. At examination by touch it is possible to feel certain individual submandibular lymphaglands which are not painful. The joints are of normal configuration. Active and passive movements are performed to their full extent. Respiration through the nose is not impeded. At the comparative percussion it is possible to determine the clear lung sound. At auscultation it is possible to determine the vesicular respiration above the lungs. There are on pathologic respiratory noises. The respiratory movement rate is 16 movements per minute. The cardiovascular system: the relative cardiac dullness limits are within the norm. The heart tones are clear and of regular rhythm. The heart rate is equal to 72 heartbeats per minute. There are no noises. The arterial pressure is 120/80 mm of mercury column. The gastro-intestinal tract: the tongue is coated with white fur. There is no hyperemia of pharynx. The abdomen is of the normal shape and

participates in the respiratory process. Examination by touch shows that it is painful in all the sections of the epigastrium. The liver stands out beyond the costal arch by 3 cm. The edge of the liver is hard and painful at the examination by touch. The Ortner's, Murphy's and Vasilenko signs are negative. Bowel movement without abnormalities. The kidney punch is negative on both sides. The diuresis is normal, neurological status without abnormalities. Medical opinion: notwithstanding the applied therapy the phenomena of the gastric indigestion are aggravating, the patient started to complain of the acute pain; he is frequently vomiting; during the previous 24 hours the signs of hypovolaemia are growing.

Patient S.L. Magnitsky with the diagnosed acute pancreatitis (?), calculous cholecystitis (?) is directed to the surgical department of the hospital of the Federal Penitentiary Service (UFSIN for Moscow) Detention Center IZ-77/1.

Blood test: May 4, 2009 – polarization fluoroimmunoassay test did not reveal the antibodies to HIV...

Blood test: May 12, 2009 - microprecipitation test result to lues is negative..."

**2.3. From the patient's medical case record No. 318 maintained at Detention Center 77/2 (FGU IZ-77/2) in the name of S.L. Magnitsky** it follows that: "...the patient arrived on October 7, 2009 at 20:00. The diagnosis as at the moment of arrival: cholelithiasis, cholecystopancreatitis, chronic osteochondrosis of thoracic spine. Diagnosis (the main diagnosis): cholelithiasis, cholecystopancreatitis, exacerbation. Concomitant diseases: chronic osteochondrosis of thoracic spine with the root-pain syndrome by the type of the intercostal neuralgia...

On arrival the patient complained of the pains in the left-side hypochondrium after the meals; belt-type pain, and pains in the hypochondrium on the left side which cease after he takes anti-spasm medicines. The medical background: considers himself sick as of March when the above mentioned complaints appeared; ultrasound investigation of the abdominal cavity, diagnosis: cholelithiasis, chronic pancreatitis, calculous cholecystitis. The medical background also includes osteochondrosis of thoracic spine with the root-pain syndrome per the type of the intercostal neuralgia. The condition on arrival is satisfactory, well-nourished, the body temperature is 36.6 °C. The skin and the hypoderm are clean; there are no braking outs, oedema, acrocyanosis. The hypoderm is normally developed. The visible mucosal lining is of physiologically normal color, with no oedema. The bone and muscular system and the joints are without obvious abnormalities. At examination by touch there is pain in the area of the thoracic spine. The chest is of normal shape and participates in the respiration process. The respiratory movement rate is 18 movements per minute. The respiration at auscultation is vesicular, with no stentor. The borders of the heart are not expanded, at auscultation the tones of the heart are clear and of regular rhythm, and there are no noises. The cardiac rate is 70 heartbeats per minute...

The arterial pressure is 130/80 mm of mercury column. The tongue is humid and coated with the grayish fur at the root. At the examination by touch the abdomen is relaxed and moderately painful in the area of the right-side hypochondrium. There are no signs of peritoneum irritation. The bowel movement is normal. The lymphaglands are not enlarged, the liver edge at examination by touch is soft, extends beyond the costal arch by 1 cm. The spleen is not palpable. Diuresis is normal. The kidney punch is negative on both sides. The consciousness is clear. There are no meningeal signs or focal symptoms...

Examination on October 8, 2009 – the complaints are the same: the moderately manifested pains in the left-side hypochondrium, the sickness after taking the meals; the pains in the lumbar spine area. Objectively: the condition is satisfactory; the body temperature is 36.7 °C. The respiration in the lungs is vesicular, without stentor. The respiratory movement rate is 16 movements per minute. The cardiac tones are clear and of regular rhythm. The cardiac rate is 75 heartbeats per minute. The arterial pressure is 130/75 mm of mercury column. At the examination by touch the abdomen is moderately painful in the area of epigastrium. There are no signs of peritoneum irritation. The kidney punch is negative on both sides. The bowel movement



and the diuresis are normal. The neurological status is without abnormalities. Receives the course of treatment...

Examination on October 12, 2009 – complaints of the moderate pains in the left-side hypochondrium, the heavy feeling after taking the meals. Objectively: the condition is closer to the satisfactory one; the body temperature is 36.7 °C. The respiration in the lungs is vesicular, without stentor. The respiratory movement rate is 16 movements per minute. The cardiac tones are clear and of regular rhythm. The cardiac rate is 75 heartbeats per minute. The arterial pressure is 130/75 mm of mercury column. . At the examination by touch the abdomen is moderately painful in the area of epigastrium. There are no signs of peritoneum irritation. The kidney punch is negative on both sides. The bowel movement and the diuresis are normal...

Examination on October 15, 2009 – complaints of sickness after taking meals. Objectively: the condition is satisfactory; the body temperature is 36.4 °C. The skin integument and the visible mucous lining are of physiologically normal color, without the oedema and cyanosis. The respiration in the lungs is vesicular, without stentor. The respiratory movement rate is 17 movements per minute. The cardiac tones are clear and of regular rhythm. The cardiac rate is 78 heartbeats per minute. The arterial pressure is 125/75 mm of mercury column. At the examination by touch the abdomen is moderately painful in the right-side hypochondrium area. The liver edge extends beyond the costal arch by 1 cm, is soft at examination by touch and moderately painful. The spleen is not palpable. The bowel movement and the diuresis are normal...

Examination on October 19, 2009 – complaints of the heavy feeling in the area of epigastrium after taking the meals. Objectively: the condition is satisfactory; the body temperature is 36.5 °C. The arterial pressure is 125/70 mm of mercury column. The abdomen at deeper examination by touch is moderately painful in the right-side hypochondrium area. Regarding other organs and systems – without change...

Examination on October 22, 2009 – the complaints of the feeling of discomfort in the area of epigastrium after taking the meals. Objectively: the condition is satisfactory. The skin integument and the visible mucous lining are of normal color, without the oedema, cyanosis or the pathological outbrakes. The respiration in the lungs is vesicular, without stentor. The respiratory movement rate is 18 movements per minute. The cardiac tones are clear and of regular rhythm. The cardiac rate is 70 heartbeats per minute. The arterial pressure is 120/70 mm of mercury column. The abdomen at examination by touch is slightly painful in the area of epigastrium...

Examination on October 26, 2009 – the patient does not approach with the active complaints. Objectively: the condition is satisfactory; the body temperature is 36.8 °C. The arterial pressure is 125/70 mm of mercury column. At examination by touch the abdomen is relaxed, without pains in any part...

Examination on October 29, 2009 - the patient does not approach with the active complaints. Objectively: the condition is satisfactory. The skin integument and the visible mucous lining are of normal color, without the oedema, cyanosis or the pathological outbrakes. The cardiac tones are clear and of regular rhythm, without noises. The cardiac rate is 68 heartbeats per minute. The arterial pressure is 120/75 mm of mercury column. At examination by touch the abdomen is relaxed, without pains in any part. The liver is within the costal arch...

Examination on November 2, 2009 – no complaints. Objectively: the condition is satisfactory; the body temperature is 36.7 °C. The skin integument and the visible mucous lining are of normal color, without the oedema, cyanosis or the pathological outbrakes. The cardiac tones are clear and of regular rhythm, without noises. The cardiac rate is 76 heartbeats per minute. The arterial pressure is 125/75 mm of mercury column. At examination by touch the abdomen is relaxed, without pains in any part. The liver is within the costal arch...

Examination on November 9, 2009 - no complaints. Objectively: the condition is satisfactory; the body temperature is 36.6°C. The organs and systems are without negative

changes. The arterial pressure is 120/70 mm of mercury column. At examination by touch the abdomen is relaxed, without pains in any part. The liver is within the costal arch...

Examination on November 12, 2009 - no complaints. Objectively: the condition is satisfactory; the body temperature is 36.7°C. The skin integument and the visible mucous lining are of normal physiological color, humid, without the pathological outbreaks. There is no cyanosis or oedema. The respiration in the lungs is vesicular, without stentor. The borders of the heart by percussion are within the norm. The cardiac tones are clear and of regular rhythm, without noises. The cardiac rate is 70 heartbeats per minute. The arterial pressure is 120/80 mm of mercury column. The tongue is pink and humid, without the fur. There is no hyperemia of pharynx. At examination by touch the abdomen is without pains in any part and relaxed, there are no signs of peritoneum irritation. The liver is within the costal arch. The patient is fully conscious and adequate. Opinion: the patient is checking out in the satisfactory condition with the following diagnosis: the chronic cholecystopancreatitis, non-acute condition. Recommended: diet menu no. 1; cholenzym, pansinorm-forte, ranitidine...

Prescription chart as of October 8, 2009 till November 12, 2009: general regimen; diet menu no. 76, 1) pasinorm-forte tablets: 1 tablet 3 times a day (on hands); 2) diclofenac tablets: 1 tablet 3 times a day (on hands) (until October 19, 2009); 3) nitrosorbidum: 2 tablets 3 times a day (on hands) (*usually nitrosorbidum is prescribed to be taken by 1 tablet 3 times a day and only when there is a special reason which was not fixed in the present medical case record it is possible to use it by 2 tablets 3 times a day – the comment made by the expert commission*); 4) drotaverine 2.0 – intramuscularly, before the night (until October 15, 2009); 5) ranitidine: by 1 tablet to be taken 3 times a day (as of October 14, 2009); solution of vitamin B12 - 2.0 – intramuscularly No. 10 (until October 15, 2009)...

Electrocardiogram dated October 21, 2009 – conclusion: PR – 0.12; QRS – 0.08, QT – 0.38; The cardiac rate is average, sinus rhythm, regular, 66 heartbeats per minute, electrical axis of heart - N. Written by graphite pencil: the only copy – there are changes but they are of tenuous nature...”

**2.4. From the patient’s medical case record No. 352 maintained at Detention Center 77/2 (FGU IZ-77/2) in the name of S.L. Magnitsky** it follows that: “...(the patient) arrived on November 13, 2009, the time is not specified, checked out on November 16, 2009, to Detention Center 1, spent 3 bed-days. Diagnosis as on the day of arrival: cholelithiasis, chronic cholecystitis, chronic pancreatitis, exacerbation. Diagnosis (main diagnosis): cholecystopancreatitis, exacerbation.

Examination on November 16, 2009 – the complaints of the patient on arrival are as follows: pains in the epigastrium, in the right-side hypochondrium with radiation to the back, sickness, and vomiting. Medical background: suffers from cholelithiasis, chronic cholecystitis, chronic pancreatitis as of March 2008; the previous exacerbation took place on November 13, 2009 (*the number 12 is corrected to 13 by writing up – comment made by the expert commission*) when the above complaints appeared after the deviations in the diet. Tuberculosis, HIV-infection, venereal disease, viral hepatitis. As of November 13, 2009 till November 16, 2009 received anti-spasm therapy. During the examination on November 16, 2009, at 09:00, was found to be in the medium gravity condition, the body temperature is 36.5 °C. The skin and the hypoderm are pale. The visible mucous lining is of normal physiological color. The bone and muscular system is without visible abnormality. The respiration in the lungs is vesicular, without stentor. The respiratory movement rate is 16 movements per minute. The cardiac tones are clear and of regular rhythm. The arterial pressure is 120/80 mm of mercury column. The pulse is 86 beats per minute, of satisfactory properties. The tongue is humid, and coated with the white fur. The abdomen is slightly swollen, participates in the breathing. It is to some extent tense at examination by touch and painful in the epigastrium and in the right-side hypochondrium. The Ortner and Murphy’s signs are positive. There are no signs of peritoneum irritation, the vermicular movement is heard, the gases come off, there is no dysuria. The liver stands out from

beyond the costal arch by “+” 3 cm. The spleen is not palpable. The diuresis is normal, the kidney punch on both sides (the description of the symptom has not been recorded). The consciousness is clear. There are no meningeal signs, focal symptoms or sensation disorders...

Examination in the department on November 16, 2009 at 09:00 – the medium gravity condition, the body temperature is 36.57°C, does not have any bodily injuries. The complaints of the belt-type pains in the epigastrium, in the right-side hypochondrium, sickness and vomiting. The skin integument and the mucous lining are slightly pale. The respiration in the lungs is vesicular, without stentor. The circulatory dynamics is stable. The arterial pressure is 110/70 mm of mercury column. The pulse is 84 (beats per minute). The tongue is humid, and coated with the white fur. The abdomen is slightly swollen, participates in the breathing. It is to some extent tense at examination by touch and painful in the epigastrium and in the right-side hypochondrium. The Ortner and Murphy’s signs are positive. There are no signs of peritoneum irritation, the vermicular movement is heard, the gases come off, there is no dysuria. Opinion: exacerbation of chronic cholecystopancreatitis. The patient must urgently be taken to Detention Center 77/1 special hospital surgical department.

Prescription chart as of November 13 till November 16 of the year 2009: 1) solution of drotaverin 2.0; papaverine 4.0 – to be administered intramuscularly once each day; absolute diet; 3) apply cold on the abdomen...

The abstract from the medical case record (without the number or date) – (the patient) is under the supervision at the therapy department of Federal Penitentiary Service (UFSIN for Moscow) Detention Center IZ-77/2 with the following diagnosis: cholelithiasis, cholecystopancreatitis, exacerbation. Medical background: considers himself sick as of March 2008 when the above mentioned complaints appeared. Was hospitalized to State Clinical Hospital (GKB) No. 36 where he was examined with the determined diagnosis: cholelithiasis, chronic pancreatitis, calculeous cholecystitis. Receives the following treatment: pansinorm Forte; nitrosorbidum, drotaverine, phospholugel; allocholum. At present provides the complaints of acute belt-type pains, vomiting every three hours. Objectively: moderately grave condition. The skin integument and the visible mucous lining are clean, moderately humid, and cool to the touch. There is no peripheral oedema observed. The lymphaglands are not visible. At examination by touch it is possible to feel certain individual submandibular lymphaglands which are not painful. The joints are of normal configuration. Active and passive movements are performed to their full extent. Respiration through the nose is not impeded. At the comparative percussion it is possible to determine the clear lung sound. At auscultation it is possible to determine the vesicular respiration above the lungs. There are on pathologic respiratory noises. The respiratory movement rate is 16 movements per minute. The cardiovascular system: the relative cardiac dullness limits are within the norm. The heart tones are clear and of regular rhythm. The heart rate is equal to 72 heartbeats per minute. The there are no noises. The arterial pressure is 120/80 mm of mercury column. The gastro-intestinal tract: the tongue is coated with white fur. There is no hyperemia of pharynx. The abdomen is of the normal shape and participates in the respiratory process. Examination by touch shows that it is painful in all the sections of the epigastrium. The liver stands out beyond the costal arch by 3 cm. The edge of the liver is hard and painful at the examination by touch. The Ortner’s, Murphy’s and Vasilenko signs are negative. Bowel movement without abnormalities. The kidney punch is negative on both sides. The diuresis is normal, neurological status without abnormalities.

Medical opinion: notwithstanding the applied therapy the phenomena of the gastric indigestion are aggravating, the patient started to complain of the acute pain; he is frequently vomiting; during the previous 24 hours the signs of hypovolaemia are growing. Patient S.L. Magnitsky with the diagnosed acute pancreatitis (?), calculeous cholecystitis (?) is directed to the surgical department of the hospital of the Federal Penitentiary Service (UFSIN for Moscow) Detention Center IZ-77/21...”

**2.5. From the patient's medical case record No. 554 maintained at Detention Center 77/2 (FGU IZ-77/2) in the name of S.L. Magnitsky** it follows that: "... (the patient) arrived on November 16, 2009 at 21:20 and died on November 16, 2009 at 21:50, the total time of stay is 30 minutes. Diagnosis as at the moment of arrival: chronic cholecystitis, chronic pancreatitis, exacerbation. Diagnosis (main diagnosis): cholelithiasis, acute calculeous cholecystitis, acute pancreatitis. Pancreonecrosis?

Examination by the surgeon at the collection department on November 16, 2009 at 18:30 - complaints of the weakness, multiple vomiting, belt-type pain in the epigastrium and in both hypochondria; algor. Medical background: has been ill for 4 days when the above mentioned complaints appeared. Was brought on board the ambulance. The main medical background includes: cholelithiasis, drug history – without abnormalities. The condition is close to the medium gravity degree. The patient is in consciousness and behaves adequately. The body temperature is 36.6 °C; the heart rate is equal to 82 heartbeats per minute. The arterial pressure is 120/70 mm of mercury column. The skin integument is pale, and the visible mucous lining is of the usual color. The peripheral lymphaglands are not palpable and are not painful. The respiration in the lungs is vesicular. The heart tones are dull, the rhythm is regular. The tongue is slightly dry, and coated with the white fur. The abdomen is tense in the area of epigastrium and painful at examination by touch in both hypochondria. The vermicular movement is heard. There are no signs of peritoneum irritation. There defecation was on 15.11.2009 with formed stool. The emiction is painless, at normal intervals of time. Diagnosis: cholelithiasis; acute calculeous cholecistitis; acute pancreatitis. Pancreonecrosis? There are no bodily injuries besides the marks of the handcuffs on both wrists...

Examination at the collection department on November 16, 2009 at 19:00 – the condition of the patient has acutely worsened. The patient behaves inadequately, is exited and disoriented. Talks to a "voice". Yells that someone wants to kill him. The condition is assessed to be the acute psychosis, the psychiatric "03" ambulance is called for, order No. 904253...

Examination by the surgeon on duty at the collection department on November 16, 2009 at 19:30 – the intravenous infusion is not possible due to the aggressive and inadequate conduct of the patient. The sedative therapy is not recommended prior to the arrival of the "03" team. The prescription is: spazgan 5.0 – to be administered intramuscularly...

Examination by the surgeon on duty on November 16, 2009 at 21:15 – the surgeon was urgently called to the collection department in connection with the acute worsening of the patient's condition. At the examination of the psychiatrists the patient lost consciousness. The paramedic of the collection department started the reanimation procedures (closed chest cardiac resuscitation, artificial lung ventilation with the Ambu-bag). The patient is urgently transferred to the intensive therapy ward at 21:20 where the resuscitation activity was continued (closed chest cardiac resuscitation, artificial lung ventilation, injection of hormones, and adrenaline 0.1% - 5.0; atropine 0.1% - 1 (or 5 – corrected – comment made by the expert commission) during 30 minutes without effect. On November 16, 2009 at 21:50 the biological death of the patient is certified...

Postmortem summary: The patient, Sergey Leonidovitch Magnitsky, birth date April 8, 1972, IB No. 554, arrived from Detention Center 77/2 with the support diagnosis including the acute cholecystopancreatitis. Earlier he was examined at GKB No.36 and received the diagnosis of as follows: cholelithiasis. Chronic calculeous cholecystitis. Chronic pancreatitis (2008).

The condition of the patient on the arrival was close to moderate grave; the patient was fully conscious and adequate. The body temperature was normal. The heart tones were of regular rhythm and somewhat dull. The arterial blood pressure was 120/70 mm of mercury column. The heart rate was equal to 82 heartbeats per minute. The respiration was vesicular and available in all parts of the lungs. The tongue is slightly dry and coated with the white fur. The abdomen is tense in the area of epigastrium and painful at examination by touch in both hypochondria. The vermicular movement is heard. There are no peritonitis signs. There defecation was normal, with formed stool.

On November 16, 2009, at 19:00, the patient's condition took a sharp turn to the worse. The patient's behavior became inadequate; he was excited and disoriented, talked to the "voice". Taking into account the inadequate condition of the patient the psychiatric the "03" ambulance was called for. Prior to the arrival of the team of psychiatrists it was planned to give the patient the anti-spasm therapy however that became impossible due to the patients aggressive conduct.

At 21:15 the patient was again examined in connection with the worsening of his condition. During the examination of the psychiatrist the patient's condition suddenly became much worse and he lost consciousness. The reanimation procedures were started (closed chest cardiac resuscitation, artificial lung ventilation with the Ambu-bag). The patient was urgently transferred to the intensive therapy ward where the resuscitation activity was continued: closed chest cardiac resuscitation, artificial lung ventilation, injection of hormones and adrenaline (the summary dose was 0.1 % - 5 ml). Reanimation procedures applied for 30 min. remained without effect. The biological death of the patient was certified on November 16, 2009 at 21:50.

Diagnosis: cholelithiasis. Acute calculous cholecystitis (?). Acute pancreatitis (?).  
Pancreonecrosis (?) Acute psychosis. Toxic shock syndrome. Infarct of myocardium (...)

Request submitted in the name of the head of Federal Penitentiary Service (UFSIN for Moscow) – I request your permission for the transfer of Magnitsky Sergey Leonidovitch, birth year 1972, for urgent hospitalization to the special medical facility. Diagnosis: Acute pancreatitis (?) Calculous cholecystitis (?). The request is attached with the abstract from the medical case record on two pages specifying the reason for the call...

The abstract from the medical case record (without number or date) – the patient is under the supervision in the therapy department of Federal Penitentiary Service (UFSIN for Moscow) Detention Center 77/2 with the diagnosis: cholelithiasis, cholecystopancreatitis, exacerbation. Medical background: considers himself sick as of March 2008 when the above mentioned complaints appeared. Was hospitalized to State Clinical Hospital (GKB) No. 36 where he was examined with the determined diagnosis: cholelithiasis, chronic pancreatitis, calculous cholecystitis.

Receives the following treatment: pansinorm Forte; nitrosorbidum, drotaverine, phospholugel; allocholum. At present provides the complaints of acute belt-type pains, vomiting every three hours.

Objectively: moderately grave condition. The skin integument and the visible mucous lining are clean, moderately humid, and cool to the touch. There are no peripheral oedema observed. The lymphaglands are not visible. At examination by touch it is possible to feel certain individual submandibular lymphaglands which are not painful. The joints are of normal configuration. Active and passive movements are performed to their full extent. Respiration through the nose is not impeded. At the comparative percussion it is possible to determine the clear lung sound. At auscultation it is possible to determine the vesicular respiration above the lungs. There are on pathologic respiratory noises. The respiratory movement rate is 16 movements per minute. The cardiovascular system: the relative cardiac dullness limits are within the norm. The heart tones are clear and of regular rhythm. The heart rate is equal to 72 heartbeats per minute. There are no noises. The arterial pressure is 120/80 mm of mercury column. The gastro-intestinal tract: the tongue is coated with white fur. There is no hyperemia of pharynx. The abdomen is of the normal shape and participates in the respiratory process. Examination by touch shows that it is painful in all the sections of the epigastrium. The liver stands out beyond the costal arch by 3 cm. The edge of the liver is hard and painful at the examination by touch. The Ortner's, Murphy's and Vasilenko signs are negative. Bowel movement without abnormalities. The kidney punch is negative on both sides. The diuresis is normal, neurological status without abnormalities.

Medical opinion: notwithstanding the applied therapy the phenomena of the gastric indigestion are aggravating, the patient started to complain of the acute pain; he is frequently vomiting; during the previous 24 hours the signs of hypovolaemia are growing.

Patient S.L. Magnitsky with the diagnosed acute pancreatitis (?), calculeous cholecystitis (?) is directed to the surgical department of the hospital of the Federal Penitentiary Service (UFSIN for Moscow) Detention Center IZ-77/1...”

**2.6. From the transfer document of the ambulance No. 782896 and the coupon to it in the name of Magnitsky Sergey Leonidovitch** it follows that: “...diagnosis is acute cholecystopancreatitis, transported to Detention Center 77/1 special medical facility on November 16, 2009 at 18:30 p.m. pursuant to the call received at 14:57 p.m. The arterial blood pressure (of the patient) is 160/80 mercury column mm...”

Experts: (signature) V.A. Lyanenko, (signature) L.A. Shmarov; (signature) K.V. Shatalov; (signature) I.V. Klyuchnikov; (signature) V.T. Ivashkin; (signature) Yu.V. Marchenkov; (signature) L.V. Kartursky

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## CONCLUSIONS

On the basis of the conducted examinations we arrive to the following conclusions:

***1. Which of the failures in the medical aid provided to S.L. Magnitsky, revealed by the expert commission and listed in Expert Opinion No. 555/10 dated 15 June 2011, namely:***

- failure to take necessary diagnostic measures despite complaints of dull pains in the right hypochondrium and pains in the stomach pit, nausea and vomiting;***
- failure to take necessary diagnostic measures despite complaints of heart pains radiating to the back;***
- failure to prescribe a timely adequate treatment of the existing diseases that caused the death;***
- failure to take necessary diagnostic measures despite the suspected diabetes, the first signs of which were observed on 13 November 2009;***
- failure to give an appropriate therapy at the time of a sudden breakdown in the health condition, which took place approximately at 19:00 on 16 November 2009;***

***are in the direct cause-effect relation to the grave consequences which manifested themselves in the death of S.L. Magnitsky?***

S.L. Magnitsky’s death caused by a number of concurrent diseases:

- the secondary dismetabolic cardiac myopathy with the underlying diabetes mellitus;
- the chronic active hepatitis,

Aggravated with the fibrillation of the heart ventricles with the development of the acute heart insufficiency, cerebral edema, and pulmonary edema with the acute interalveolar and subarachnoidal blood effusions.

Concomitant diseases:

- arteriosclerosis;
- coarctating atherosclerosis of coronary arteries (arterial lipidosis);
- chronic calculeous cholecystitis;
- chronic indurative pancreatitis;
- the left-side osteochondrosis of thoracic spine with the nerve-root pain syndrome per -
- the type of the intercostal neuralgia;
- steatosis of the 1<sup>st</sup> to 2<sup>nd</sup> degree.

In course of provision of the medical assistance to S.L. Magnitsky the following shortcomings were allowed:

In case of the complaints of the dull pains in the right hypochondrium as well as of the pains in the epigastrium, sickness, vomiting it was necessary to carry out:

- the general clinic blood test;
- the general clinic urine test;
- the biochemical blood test including for the enzymes and lipase;
- the test of urine for diastatic enzyme;
- the ultrasound examination of the abdominal cavity organs (was carried out on July 1, 2009; revealed the signs of the chronic pancreatitis, calculous cholecystitis, as well as the moderately increased echogenicity of the liver pulp);
- the blood test for the hepatitis markers.

The above listed measures had not been carried out (besides only one of them which was the ultrasound investigation of the abdominal cavity organs); their implementation could be ministerial to the timely revealing by the diagnostics of the chronic active hepatitis and the diabetes mellitus which Magnitsky was suffering from .

In case of Magnitsky's complaints of the pains in the area of the heart radiating into the area of the back (which were denoted by him in the letter on August 23 and 24, 2009) it was necessary to carry out:

- the additional electrocardiographic examination (electrocardiographic examination was carried out only once, on October 21, 2009 and there was no pathology revealed at that time);
- X-ray examination of the intrathoracic organs (the intrathoracic organs examination was carried out on October 21, 2009 and July 10, 2009, and there was no pathology revealed);
- the biochemical blood test;
- the echocardiographic examination (it seems most likely that no pathology would have been revealed, however it is not excluded that there could have been revealed a slight increase of the heart size).

The above listed diagnostic measures were partially carried out. It is necessary to note that their full implementation would not have been able to guarantee revealing the cardiac myopathy which was diagnosed post mortem mainly based on the microscopic examination data and on the minimum macroscopic changes.

There wasn't a timely and adequate treatment prescribed for the diseases which S.L. Magnitsky had and which served to be the cause of his death:

- the course of treatment required in case of the chronic active hepatitis should have included the prescription of:

- ll. hepatoprotectors (for example, legalon or carsil);
- mm. pancreatic enzyme preparations (for example, pansinorm);
- nn. antiulcer preparations (for example, de-nol, bisnol);
- oo. corrective diet (Diet no. 5).

- as S.L. Magnitsky did not have the clinic manifestations of the secondary dismetabolic cardiac myopathy (such as the respiratory distress and oedema) there were no indications for the prescription of the respective therapy.

At suspicion that S.L. Magnitsky may be suffering from the diabetes mellitus which first appeared on November 13, 2009 it was necessary to carry out:

- the general clinic blood test;
- the general urinal analysis;
- the biochemical blood test including with determining of the glucose level;
- glucose tolerance test.

The above listed measures had not been carried out, however their implementation could be ministerial for revealing by diagnostics of the diabetes mellitus S.L. Magnitsky was suffering from.

The implementation of all the above listed diagnostic measures would have allowed to timely diagnose the diabetes mellitus and the chronic active hepatitis S.L. Magnitsky was suffering from and prescribe the adequate treatment which could have prevented the progress of the above diseases and, respectively, of the secondary dismetabolic cardiac myopathy and avoid the marginal outcome, i.e. of the patient's death on November 16, 2009.

The failure to implement of the above listed measures deprived S.L. Magnitsky of the benign outcome chance.

Thus the shortcomings in the provision of the medical assistance to S.L. Magnitsky are regarded to be in direct causative connection with the ensuing of the marginal outcome, i.e. of the patient's death.

2. There was no adequate therapy applied when S.L. Magnitsky's condition took an obvious sharp turn to the worse at approximately 19:00 on November 16, 2009 and he became inadequate, excited, disoriented, started talking to the "voices" and had heart fibrillation, specifically:

- the sedative therapy (administering aminazin intramuscularly);
- the infusion therapy (for instance, solutions of albumin and plasma);
- heart stimulating therapy applied at the development of heart fibrillation (defibrillation, intracardiac injection of the adrenaline under the electrocardiographic supervision).

The failures in the provision of the medical aid to S.L. Magnitsky, allowed on 16.11.2009 at the time of a sudden breakdown in the patient's condition, are not in the direct cause-effect relation to the negative outcome, that is his death, because the ventricular fibrillation that S.L. Magnitsky testifies of serious irreversible damage to the heart performance, which, when developing and aggravated by the cardiomyopathy, leads in most casts to the negative outcome (death) even if a complete series of life support measures is performed.

It should be also noted that the ventricular fibrillation observed with S.L. Magnitsky spoke of a marked cardiopathy, which, however, does not exclude that there might have been compensated heart performance stated before 16.11.2009;

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