

Kazan (Volga region) Federal University
Department of morphology and general pathology

**Topic: Morphological studies
in clinics.
Autopsy.**

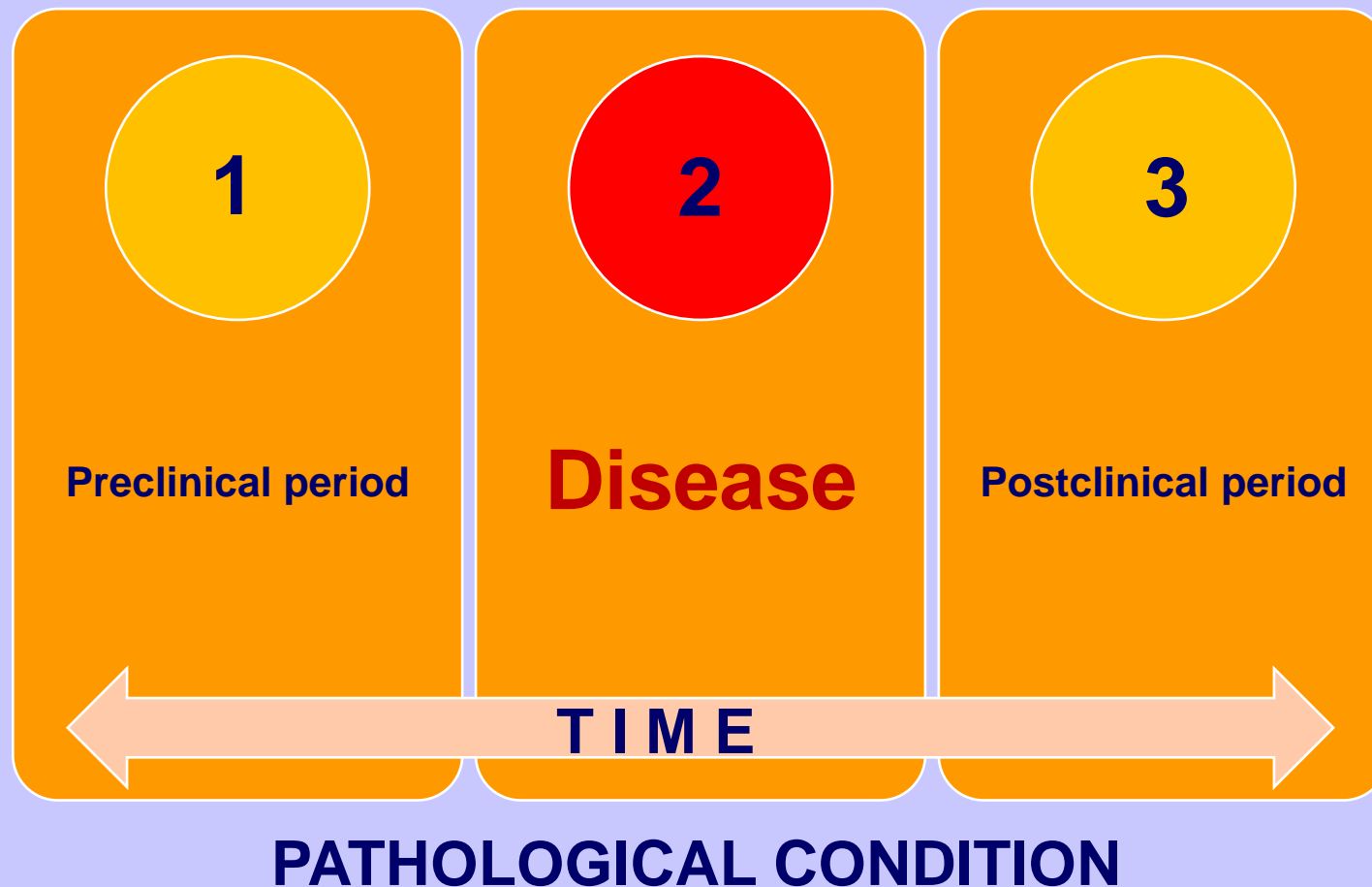
R.V.Deev
M.O. Mavlikeev

Kazan, 2015

Plan of lecture:

- 1. The general concept of pathologo-anatomical service in the system of public health.**
- 2. Objectives and types of morphological studies in clinical practice.**
- 3. History of autopsy**
- 4. Rules of the autopsy**

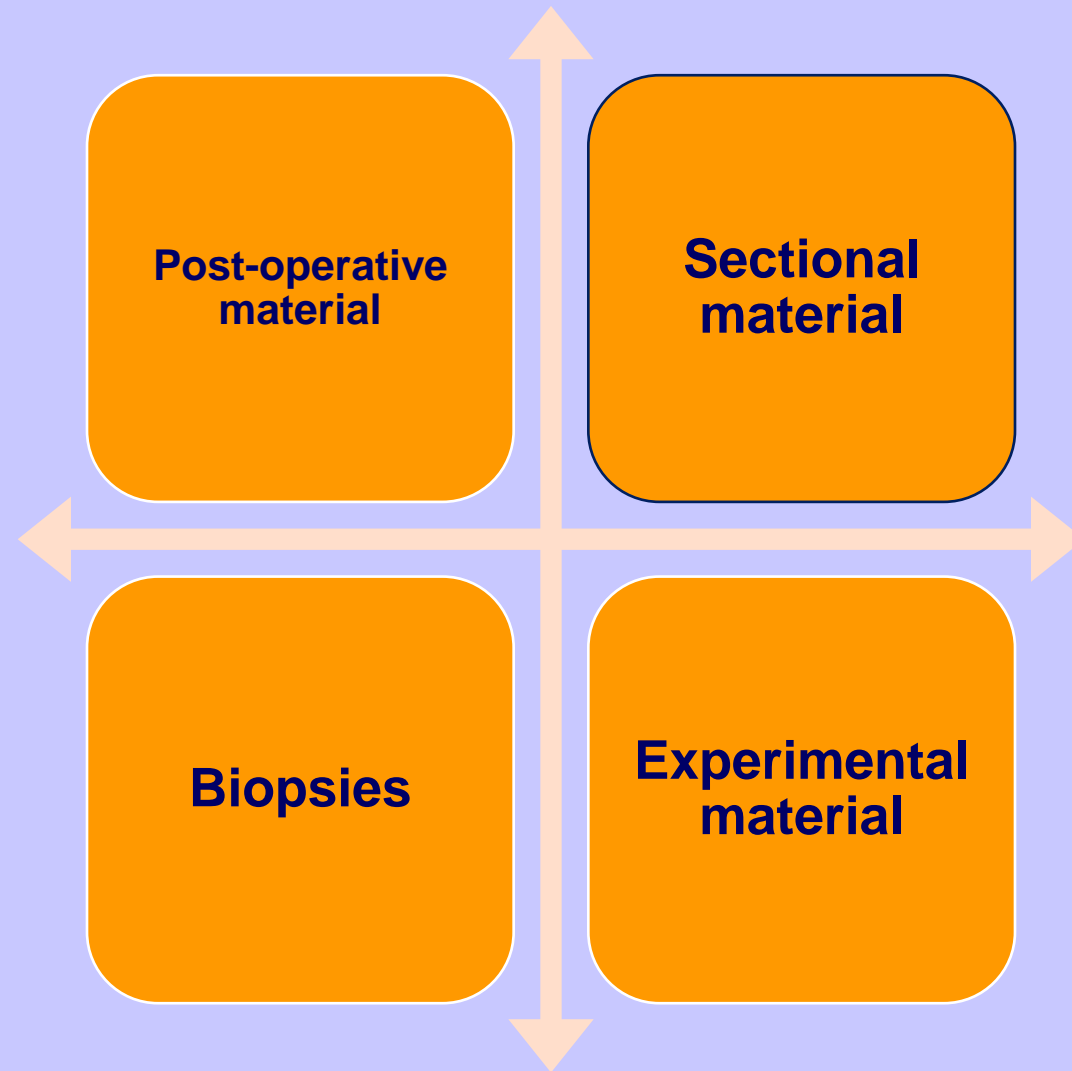
Pathological Anatomy (syn. - Pathomorfology) (Greek: Pathos - painful) - medical science about structural bases of diseases and pathological conditions.



What does it study?

- Structural bases of pathological conditions at the subcellular, cellular, tissue, organ and organism levels.
- Molecular bases, etiology, pathogenesis, pathomorphogenesis of pathological processes and disease.
- Thanatogenesis.
- Pathomorphosis of diseases.
- Pathological embryogenesis.

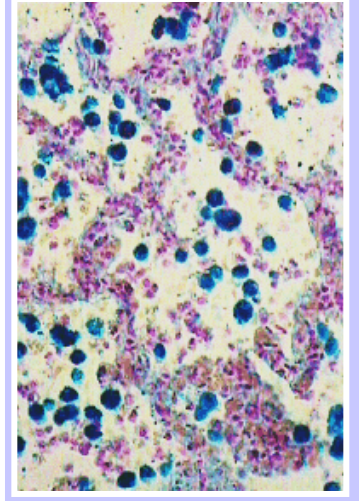
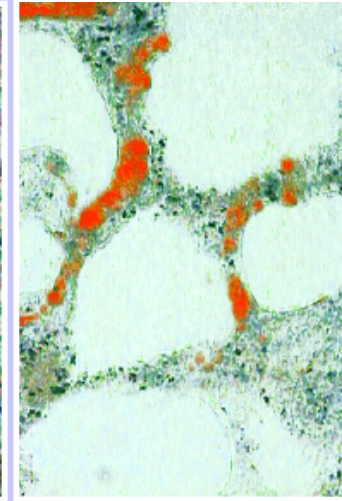
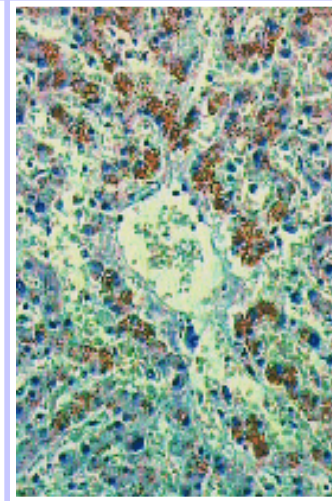
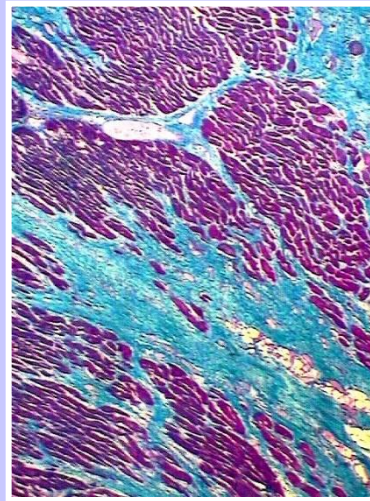
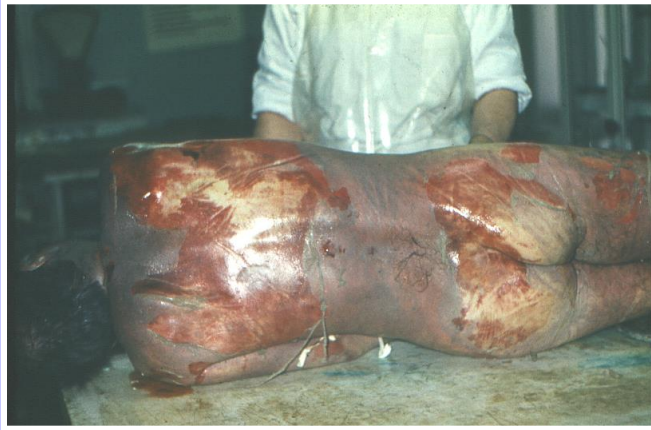
The material for pathological studies



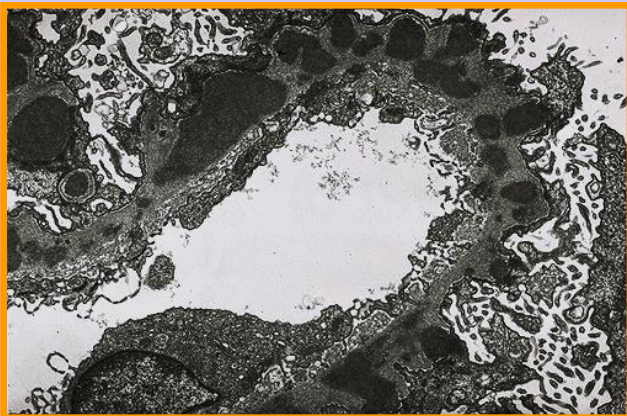
Methods of morphological studies

Light microscopy

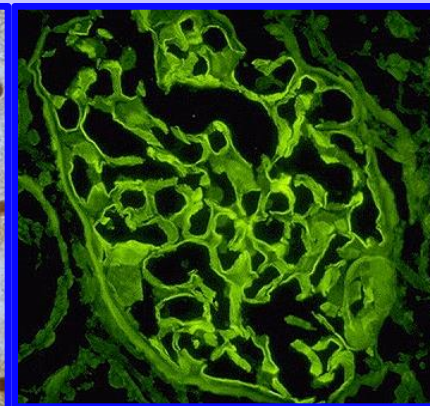
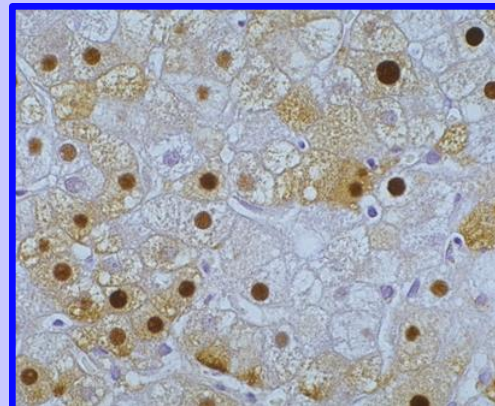
Autopsy



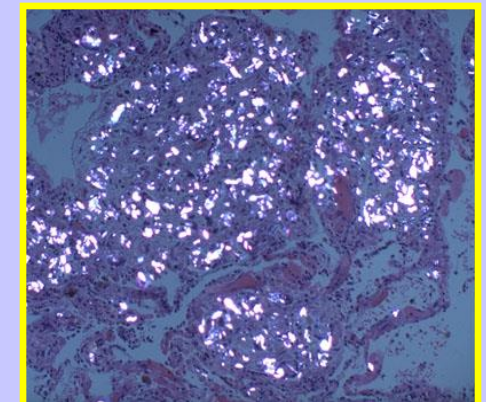
Electronic microscopy



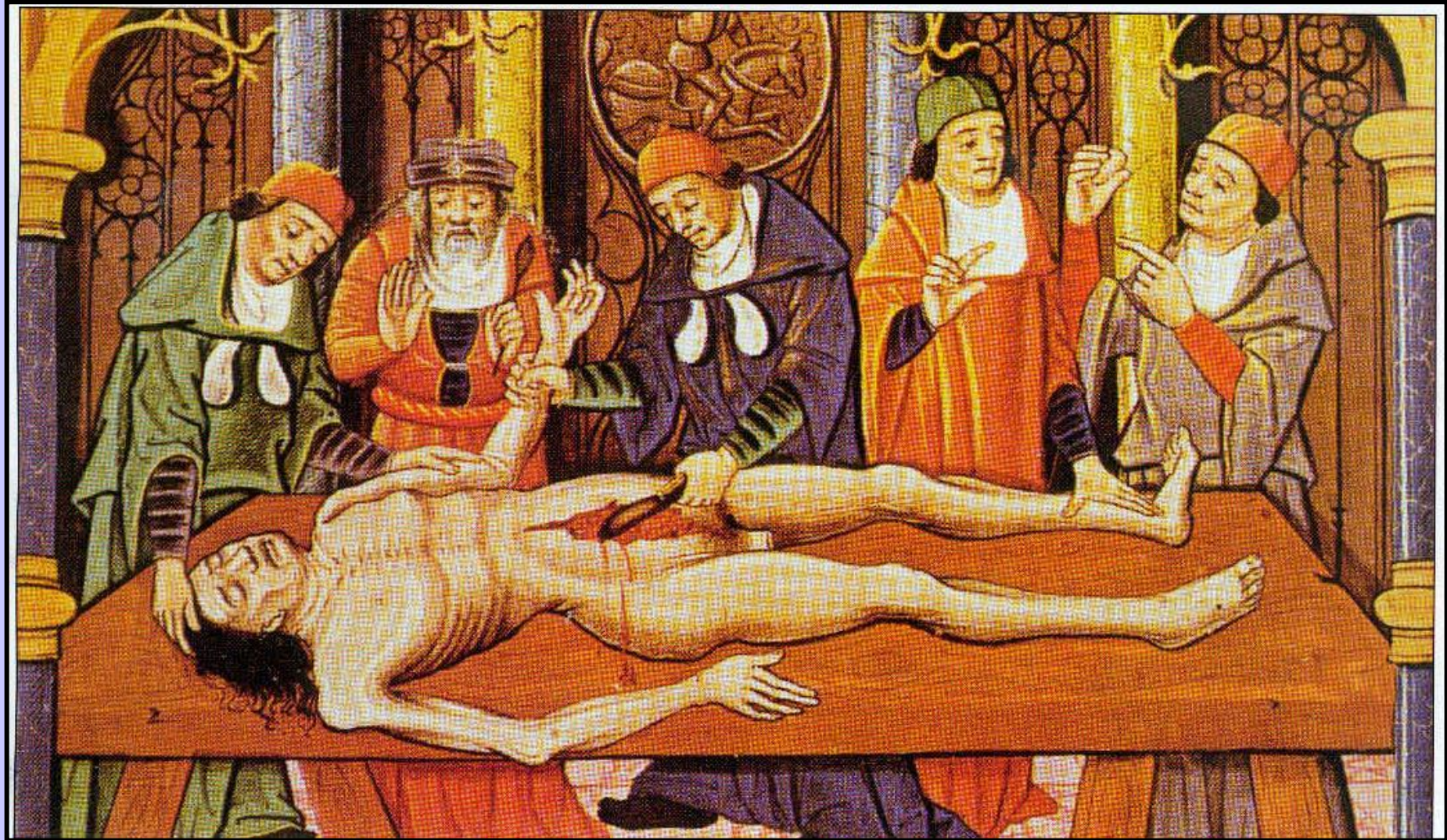
Immunohistochemistry/ immunofluorescence



Polarization microscopy



General concepts of pathoanatomical service in the healthcare system





РОССИЙСКОЕ ОБЩЕСТВО ПАТОЛОГОАНАТОМОВ

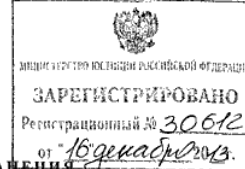
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МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ
(Минздрав России)



ПРИКАЗ

6 июня 2013 г.

№ 354н

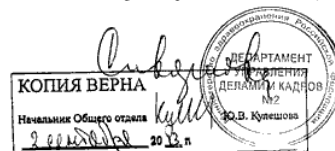
Москва

О порядке проведения патолого-анатомических вскрытий

В соответствии со статьями 14, 67 Федерального закона от 21 ноября 2011 г. № 323-ФЗ «Об основах охраны здоровья граждан в Российской Федерации» (Собрание законодательства Российской Федерации, 2011, № 48, ст. 6724; 2012, № 26, ст. 3442, 3446), приказываю:

1. Утвердить:
порядок проведения патолого-анатомических вскрытий согласно приложению № 1;
форму учетной медицинской документации № 013/у «Протокол патолого-анатомического вскрытия» согласно приложению № 2;
форму учетной медицинской документации № 013-1/у «Протокол патолого-анатомического вскрытия плода, мертворожденного или новорожденного» согласно приложению № 3;
форму учетной медицинской документации № 015/у «Журнал регистрации поступления и выдачи тел умерших» согласно приложению № 4.
2. Признать утратившим силу приказ Министерства здравоохранения и медицинской промышленности Российской Федерации от 29 апреля 1994 г. № 82 «О порядке проведения патолого-анатомических вскрытий» (зарегистрирован Министерством юстиции Российской Федерации 1 июня 1994 г., регистрационный № 588).

Министр



В.И. Скворцова

"Инструкция по унификации
микроскопических методов исследования
секционного и биопсийного материала для
патологоанатомов педиатрического профиля"
(утв. Минздравом СССР 02.07.1980 N 11-53/6)

Autopsy

Autopsy (necropsy, section) – pathoanatomical or forensic investigation of body of the deceased from natural or violent deaths aimed to the study of internal organs.

AIM

Autopsy is performed by pathologist to obtain data on the cause of death of the person and diagnosis of disease. Post-mortem autopsy is carried out by postmortem studies of internal organs and tissues of the deceased person, newborns, stillbirths and fetuses.

DIAGNOSIS – a brief report on the state of health of the patient, its existing diseases and their complications, expressed in medical terms (terms of IDC)

- Clinical
- pathoanatomical
- pathohistological
- other
- primary
- final

COMPARISON OF DIAGNOSES

is performed by comparison of:

A) the wording of the underlying disease

Б) complications

B) comorbidities

Divergence of diagnoses:

1. Nosological mismatch

2. Etiological

3. Topographic and anatomic

CAUSES OF DIAGNOSES MISMATCH

- Due to the inability to establish a diagnosis.
- Incomplete survey, but the misdiagnosis **did not** affect the onset of death.
- Wrong diagnosis has led to the mistaken choice of treatment strategy and **contributed to the** offensive of death.

In what cases it is allowed not to make autopsy?

Post-mortem autopsy is not performed in case of presence of religious reasons with a written statement of a spouse or close relatives (children, parents, adoptees, adoptive parents, siblings and relatives sisters, grandchildren, grandparents), and in their absence, other relatives or legal representative of the deceased or in the expression of the will of the deceased made them in life, except:

- 1) suspicion of violent death;
- 2) failure to establish the final clinical diagnosis of the disease, leading to death, and (or) the immediate cause of death;
- 3) the provision of the deceased patient medical organization of medical care in a hospital at least one night;
- 4) suspected overdose or intolerance of drugs or diagnostic products;

In what cases it is allowed not to make autopsy?

5) death:

a) related to the implementation of preventive, diagnostic, instrumental, anesthesiologic, intensive care, therapeutic interventions, during or after surgery, blood and (or) its components transfusions;

b) by an (suspected) infectious disease;

c) from cancer in the absence of histological verification of the tumor;

d) from a disease associated with the consequences of ecological catastrophe;

d) pregnant women, postpartum women (including the last day of the postpartum period) and children under the age of twenty-eight days of life, inclusive;

6) stillbirth;

7) The need for forensic examination.

If you suspect the presence of signs of violent death, signs of consumption of narcotic drugs or psychotropic substances without a doctor's administration corpse should be sent to forensic examination

AUTOPSY

order and rules:

Before starting the autopsy physician-pathologist **examines the medical documentation** submitted for post-mortem autopsy and, if necessary, seek clarification from the medical specialists who participated in the examination and treatment of the patient.

To conduct post-mortem autopsy of the patient who died in the medical organization providing medical care in a hospital, his **doctor (obstetrician-gynecologist, the doctor-neonatologist), paramedic, midwife, or head of the department of medical organization** in which the patient is on time of death is invited .

AUTOPSY

order and rules:

- 1) an external examination of the body;**
- 2) dissection and examination of body cavities;**
- 3) recovering organocomplex;**
- 4) study of organs and tissues;**
- 5) collecting biological material for histological and other advanced research;**
- 6) bringing the body into a worthy kind;**
- 7) laboratory processing of the biological material;**
- 8) microscopy of biological material.**

AUTOPSY

order and rules:

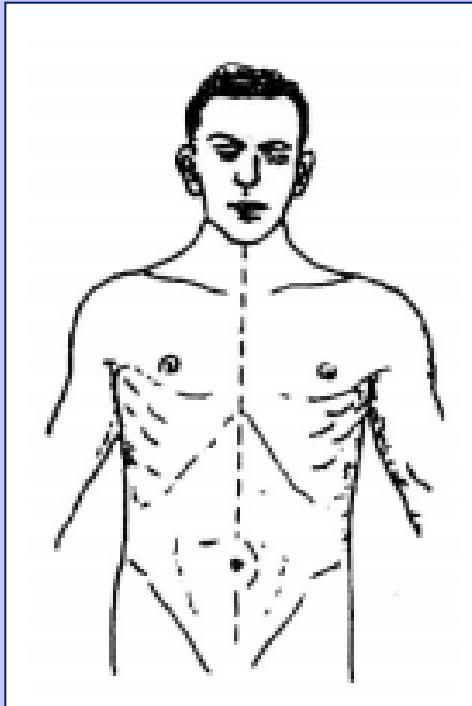
External examination of the body includes a survey of the condition of the skin, including the presence of scars and wounds, dressings, drainages, pathological formations.

An autopsy and examination of body cavities includes a survey of the condition of the walls and voids content, sintopic organ location, characteristics of serous covers.

Removing organocomplex is being performed using methods that allow to maintain the relative positions of internal organs and tissues.

Autopsy technical options

Autopsy by R. Virchow



80-s years of XIX

Метод Абрикосова. Внутренние органы извлекаются и исследуются в виде пяти топографических комплексов: а) органы шеи с органами грудной клетки; б) кишечник; в) селезенка; г) печень с желудком, двенадцатиперстной кишкой и поджелудочной железой; д) почки с надпочечниками, мочеточниками и органами малого таза.

Метод Шора. Внутренние органы извлекаются из трупа единым органокомплексом и исследуются разрезами без отделения.



Georgy Shore - a prominent Russian and Soviet pathologist and thanatologist. Honored Scientist, Professor.

AUTOPSY

order and rules:

Study of organs and tissues is performed in the following sequence:

- 1) brain and meninges;
- 2) skull and sinuses;
- 3) the tongue, pharynx, esophagus;
- 4) the trachea, bronchi, lungs;
- 5) the heart and great vessels;
- 6) mediastinum, retroperitoneal fat, chest and abdomen;
- 7) thoracic aorta, abdominal aorta, the large artery (renal, mesenteric, iliac);
- 8) kidney, adrenal gland, ureter;
- 9) pancreas, liver, gall bladder;
- 10) stomach, duodenum, small intestine, large intestine;
- 11) the bladder, prostate (uterus, ovaries);
- 12) the main vessels of extremities;
- 13) the bones and soft tissues;
- 14) the placenta (if any);
- 15) the membranes and the umbilical cord (if any).

The recommended amount of histological sectional material

The minimum amount of histological examination, **mandatory for all sectional cases.**

During necropsy for histological examination pieces are taken from the following organs:

- 1. The brain - 4 pieces (cortex, central gyrus, subcortical region - the thalamus with the wall of the lateral ventricle, the medulla, pons).**
- 2. Lungs - 4 - 5 pieces (the upper and lower lobes, basal and peripheral parts).**
- 3. Heart - 2 pieces (left and right wall of the ventricles).**
- 4. The small intestine - 2 pieces (ileum and jejunum with group follicles).**
- 5. The colon - 2 pieces (rectum and sigmoid).**
- 6. Liver - 2 - 3 pieces (1 piece for painting of fat).**
- 7. Pancreas - 3 pieces (head, body, tail).**
- 8. Salivary glands - 1 - 2 slices (parotid, submandibular).**
- 9. Spleen - 1 - 2 pieces.**
- 10. Kidney - 2 pieces.**
- 11. The adrenal glands - 2 pieces (one for painting of fat).**
- 12. Thymus gland - 2 pieces (left and right lobe).**
- 13. Lymph nodes - 3 glands: cervical, broncho-pulmonary, mesenteric.**

Movie

«Autopsy by Shore»



Conclusions and questions: