

Pathologic anatomy (introductory lecture)

September 16, 2007

Patologic anatomy

Pathologic
anatomy

Morphologic
pathology

General and organ
pathology

Pathology and its
position in
medicine

Recommended
literature

Institutes of
Pathology in Brno

1st institute of
pathology

2nd institute of
pathology

Historie

Methods of
pathology

Autopsy

Pathologic anatomy

- ▶ Institute of pathology
 - ▶ medical practice (biopsy, autopsies)
 - ▶ teaching
 - ▶ research
- ▶ Department of pathology in smaller hospitals (medical practice)

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Pathology, morphology

Deals with morphologic characteristics of diseases. According to morphologic features pathologists classify and define diagnostic units (diseases).

Other methods and features are used to classify the diseases today: microbiology, immunohistology, molecular genetics. . .).

The ultimate goal of classifications is to define diagnostics units according to reliable criteria. This classifications must correlate with clinical features of the disease (prognosis, reaction to therapy. . .).

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

General and organ pathology

- ▶ General pathology
- ▶ Organ pathology

Deals with diseases and their progress in different organ systems

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

General and organ pathology

- ▶ General pathology
- ▶ **Organ pathology**

Studies individual organs or organ systems and their diseases

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Pathology and its position in medicine

- ▶ standalone scientific discipline
- ▶ part of clinical medicine

Pathologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Pathology and its position in medicine

- ▶ standalone scientific discipline
 - ▶ **part of clinical medicine**
-
- ▶ **autopsy** verifies correctness of diagnosis and therapy
 - ▶ **biopsy** necessary to make a diagnosis, progress and extent of a disease and sometimes to verify the therapy

Pathologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Recommended literature

▶ Books

- ▶ Basic Pathology (Kumar, Cotran, Robbins)
- ▶ General and Systematic Pathology (Underwood)
- ▶ Pathology, Basic and Systemic (Woolf)

▶ Internet

- ▶ Hypertext atlas of pathology (in Czech)
- ▶ Hypertext atlas of dermatopathology
- ▶ Hypertext atlas of fetopathology

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Institutes of Pathology in Brno

- ▶ **till 1962: Institute of Pathology, St. Anna Hospital**
- ▶ 1981 – 1983: bioptic department of MOÚ
- ▶ 1992 – 1995: bioptic department in Bohuice
- ▶ 1994: private pathology Biocyt

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Institutes of Pathology in Brno

- ▶ till 1962: Institute of Pathology, St. Anna Hospital
- ▶ 1981 – 1983: bioptic department of MOÚ
- ▶ 1992 – 1995: bioptic department in Bohuice
- ▶ 1994: private pathology Biocyt

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Institutes of Pathology in Brno

- ▶ till 1962: Institute of Pathology, St. Anna Hospital
- ▶ 1981 – 1983: bioptic department of MOÚ
- ▶ 1992 – 1995: bioptic department in Bohuice
- ▶ 1994: private pathology Biocyt

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Institutes of Pathology in Brno

- ▶ till 1962: Institute of Pathology, St. Anna Hospital
- ▶ 1981 – 1983: bioptic department of MOÚ
- ▶ 1992 – 1995: bioptic department in Bohuice
- ▶ 1994: private pathology Biocyt

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

1st institute of pathology



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

(2nd) Institute of pathology Brno



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

(2nd) Institute of pathology Brno



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

(2nd) Institute of pathology Brno



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

(2nd) Institute of pathology Brno



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

(2nd) Institute of pathology Brno



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

(2nd) Institute of pathology Brno

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy



(2nd) Institute of pathology Brno



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

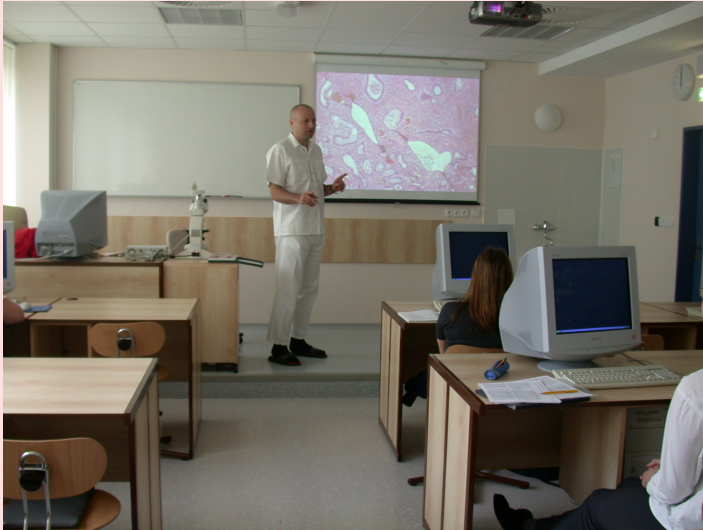
2nd institute of pathology

Historie

Methods of pathology

Autopsy

(2nd) Institute of pathology Brno



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

prof. Sternberg



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

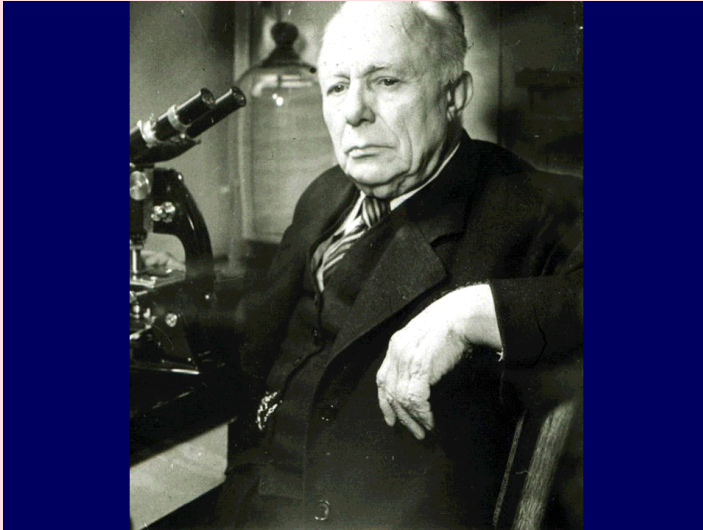
2nd institute of pathology

Historie

Methods of pathology

Autopsy

prof. Neumann



Pathologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy



Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Examinations performed by pathologists

- ▶ **Autopsy**
- ▶ Biopsy (surgical pathology)

-
- ▶ pathological (medical reasons)
 - ▶ forensic

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Examinations performed by pathologists

- ▶ Autopsy
- ▶ Biopsy (surgical pathology)

-
- ▶ Biopsy (tissues)
 - ▶ Cytology
 - ▶ Special methods of genetic analysis

Pathologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

The course of the autopsy

- ▶ External examination of a body
- ▶ Organ removal
- ▶ Autopsy of the organs, description, taking samples
- ▶ Putting the organs back, preparation for funeral
- ▶ Administrative tasks; autopsy protocol

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

The course of the autopsy

- ▶ External examination of a body
- ▶ **Organ removal**
- ▶ Autopsy of the organs, description, taking samples
- ▶ Putting the organs back, preparation for funeral
- ▶ Administrative tasks; autopsy protocol

Performed by laboratory assistant. Organ complexes are removed from the body. It is important not to damage the body over the necessary minimum; sections can be covered by clothes.

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

The course of the autopsy

- ▶ External examination of a body
- ▶ Organ removal
- ▶ **Autopsy of the organs, description, taking samples**
- ▶ Putting the organs back, preparation for funeral
- ▶ Administrative tasks; autopsy protocol

Autopsy of the organs is usually performed by standard method. Parts of dissected organs are opened in the same way, which enables to compare the findings. Specimens of tissues are taken for microscopic examination and other specimens are taken for microbiology and other methods.

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

The course of the autopsy

- ▶ External examination of a body
 - ▶ Organ removal
 - ▶ Autopsy of the organs, description, taking samples
 - ▶ **Putting the organs back, preparation for funeral**
 - ▶ Administrative tasks; autopsy protocol
-

The body is prepared for the funeral.

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

The course of the autopsy

- ▶ External examination of a body
- ▶ Organ removal
- ▶ Autopsy of the organs, description, taking samples
- ▶ Putting the organs back, preparation for funeral
- ▶ **Administrative tasks; autopsy protocol**

Autopsy protocol is put together by pathologist after the autopsy is performed and results of other examinations are available.

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Cooling boxes



Pathologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Autopsy protocol

- ▶ Description of the autopsy and macroscopic changes
- ▶ Evaluation of histological findings and results of other examinations
- ▶ Diagnostic conclusion
- ▶ Epicrisis (concise)
- ▶ Correlation of the clinical and pathological findings

External changes, organ changes, organ weights

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Autopsy protocol

- ▶ Description of the autopsy and macroscopic changes
- ▶ Evaluation of histological findings and results of other examinations
- ▶ Diagnostic conclusion
- ▶ Epicrisis (concise)
- ▶ Correlation of the clinical and pathological findings

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Autopsy protocol

- ▶ Description of the autopsy and macroscopic changes
- ▶ Evaluation of histological findings and results of other examinations
- ▶ **Diagnostic conclusion**
- ▶ Epicrisis (concise)
- ▶ Correlation of the clinical and pathological findings

-
1. Basic disease (morbus principalis)
 2. Complications (complicationes)
 3. Cause of death (causa mortis)
 4. Accessory findings (inventu accessorii)

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Autopsy protocol

- ▶ Description of the autopsy and macroscopic changes
- ▶ Evaluation of histological findings and results of other examinations
- ▶ Diagnostic conclusion
- ▶ **Epicrisis (concise)**
- ▶ Correlation of the clinical and pathological findings

In one or two sentences to summarize the basic disease, its course and the cause of death.

Patologic anatomy

Pathologic anatomy

Morphologic pathology

General and organ pathology

Pathology and its position in medicine

Recommended literature

Institutes of Pathology in Brno

1st institute of pathology

2nd institute of pathology

Historie

Methods of pathology

Autopsy

Autopsy protocol

- ▶ Description of the autopsy and macroscopic changes
- ▶ Evaluation of histological findings and results of other examinations
- ▶ Diagnostic conclusion
- ▶ Epicrisis (concise)
- ▶ **Correlation of the clinical and pathological findings**

-
1. full correlation of clinical and autoptic findings
 2. small differences
 3. substantial differences, when the clinical diagnosis is incomplete or partially wrong and such incorrect diagnosis influenced the therapy
 4. complete discrepancy between the clinical and autoptical finding