



# UNIVERSITÀ DEGLI STUDI DI PALERMO

<b>DEPARTMENT</b>	Biomedicina, Neuroscienze e Diagnostica avanzata		
<b>ACADEMIC YEAR</b>	2016/2017		
<b>MASTER'S DEGREE (MSC)</b>	MEDICINE AND SURGERY		
<b>INTEGRATED COURSE</b>	PATHOLOGICAL ANATOMY - INTEGRATED COURSE		
<b>CODE</b>	09747		
<b>MODULES</b>	Yes		
<b>NUMBER OF MODULES</b>	2		
<b>SCIENTIFIC SECTOR(S)</b>	MED/08		
<b>HEAD PROFESSOR(S)</b>	CABIBI DANIELA	Professore Ordinario	Univ. di PALERMO
	FLORENA ADA MARIA	Professore Ordinario	Univ. di PALERMO
	TRIPODO CLAUDIO	Professore Ordinario	Univ. di PALERMO
<b>OTHER PROFESSOR(S)</b>	CABIBI DANIELA	Professore Ordinario	Univ. di PALERMO
	FLORENA ADA MARIA	Professore Ordinario	Univ. di PALERMO
	RODOLICO VITO	Professore Associato	Univ. di PALERMO
	MARTORANA ANNA	Ricercatore	Univ. di PALERMO
	TRIPODO CLAUDIO	Professore Ordinario	Univ. di PALERMO
<b>CREDITS</b>	12		
<b>PROPAEDEUTICAL SUBJECTS</b>	13246 - SYSTEMATIC PATHOLOGY I - INTEGRATED COURSE 13248 - SYSTEMATIC PATHOLOGY II - INTEGRATED COURSE 13257 - SYSTEMATIC PATHOLOGY IV - INTEGRATED COURSE 13253 - SYSTEMATIC PATHOLOGY III - INTEGRATED COURSE		
<b>MUTUALIZATION</b>			
<b>YEAR</b>	5		
<b>TERM (SEMESTER)</b>	2° semester		
<b>ATTENDANCE</b>	Mandatory		
<b>EVALUATION</b>	Out of 30		
<b>TEACHER OFFICE HOURS</b>	<p><b>CABIBI DANIELA</b> Monday 14:00 15:00 Dipartimento PROMISE, Sez. Anatomia Patologica , 1 piano, Via del vespro 129</p> <p><b>FLORENA ADA MARIA</b> Monday 9:00 11:00 Anatomia Patologica 1° piano Wednesday 9:00 11:00 Anatomia Patologica 1° piano</p> <p><b>MARTORANA ANNA</b> Monday 12:00 13:00 1 piano, Istituto di Anatomia Patologica, AUOP Giaccone, Palermo Wednesday 13:00 14:00 Edificio n 11, CEFPAS, Caltanissetta.</p> <p><b>RODOLICO VITO</b> Tuesday 09:00 10:00 Campus Policlinico Universitario A.O.U.P. Via Del Vespro, 131 - Servizio di Anatomia Patologica, Edificio 9B, I piano. Per giorni e/o orari differenti, contattare il docente tramite email vito.rodolico@community.unipa.it</p> <p><b>TRIPODO CLAUDIO</b> Monday 10:00 14:00 Anatomia Patologica, Policlinico Universitario Paolo Giaccone, Piano Primo. Friday 13:00 14:00 CEFPAS, Edificio 11, Caltanissetta (Sede delle lezioni frontali di Anatomia Patologica).</p>		

**DOCENTE:** Prof. CLAUDIO TRIPODO- Sede HYPATIA

<b>PREREQUISITES</b>	Propedeutical subjects: all subjects of the first three years.
<b>LEARNING OUTCOMES</b>	Learning outcomes: Knowledge of the main pathological pictures, and the relative cell, tissue and organ lesions along with their development with reference to the most significant diseases; Comprehension of the role played by the pathologist in the clinical diagnostic process and patient management; Ability to integrate the acquired knowledge to a critical approach to diagnosis and therapeutic strategies, proving to be able to make personal judgments to solve analytical problems, develop a research-oriented attitude and be able to independently research scientific information; Ability to critically analyse and interpret the histopathological report facilitating understanding to patients.
<b>ASSESSMENT METHODS</b>	Evaluation method: oral test. Evaluation score out of 30.
<b>TEACHING METHODS</b>	Frontal teaching, laboratory practice (including surgical specimen sampling and autoptic investigation), microscopy.

**DOCENTE:** Prof.ssa ADA MARIA FLORENA- Sede CHIRONE

<b>PREREQUISITES</b>	PROPAEDEUTICAL SUBJECTS All subjects of the first three years
<b>LEARNING OUTCOMES</b>	LEARNING OUTCOMES Knowledge of the main pathological pictures, and the relative cell, tissue and organ lesions along with their development with reference to the most significant diseases. Comprehension of the role played by the pathologist in the clinical diagnostic process and patient management. ability to integrate the acquired knowledge to a critical approach to diagnosis and therapeutic strategies, proving to be able to make personal judgments to solve analytical problems, develop a research-oriented attitude and be able to independently research scientific information; Ability to critically analyse and interpret the histopathological report facilitating understanding to patients;
<b>ASSESSMENT METHODS</b>	EVALUATION METHODS Oral test, EVALUATION Out of 30 <a href="http://www.unipa.it/scuole/dimedicinaechirurgia">http://www.unipa.it/scuole/dimedicinaechirurgia</a>
<b>TEACHING METHODS</b>	Frontal teaching, Laboratory practice, Microscope activity N.B. Given the division in two-semester of the Integrated Course and being the teachers (Prof. Ada Maria Florena, Prof. Emiliano Maresi) pertaining to the same SSD (MED / 08), the schedule of lessons of each teacher is distributed in both semesters.

**DOCENTE:** Prof.ssa DANIELA CABIBI- Sede IPPOCRATE

<b>PREREQUISITES</b>	PROPAEDEUTICAL SUBJECTS All subjects of the first three years
<b>LEARNING OUTCOMES</b>	Knowledge of the main pathological pictures, and the relative cell, tissue and organ lesions along with their development with reference to the most significant diseases. Comprehension of the role played by the pathologist in the clinical diagnostic process and patient management. ability to integrate the acquired knowledge to a critical approach to diagnosis and therapeutic strategies, proving to be able to make personal judgments to solve analytical problems, develop a research-oriented attitude and be able to independently research scientific information; Ability to critically analyse and interpret the histopathological report facilitating understanding to patients;
<b>ASSESSMENT METHODS</b>	EVALUATION METHODS Oral test, EVALUATION Out of 30 <a href="http://www.unipa.it/scuole/dimedicinaechirurgia">http://www.unipa.it/scuole/dimedicinaechirurgia</a>
<b>TEACHING METHODS</b>	Frontal teaching, Laboratory practice, Microscope activity N.B. Given the division in two-semester of the Integrated Course and being the teachers pertaining to the same SSD (MED / 08), the schedule of lessons of each teacher is distributed in both semesters.

**MODULE  
PATHOLOGICAL ANATOMY I**

*Prof. CLAUDIO TRIPODO - Sede HYPATIA, - Sede HYPATIA*

**SUGGESTED BIBLIOGRAPHY**

COTRAN KUMAR ROBBINS - Le Basi Patologiche delle Malattie - PICCIN  
KUMAR ABBAS FAUSTO ASTER – Le Basi Patologiche delle Malattie - (Elsevier) MASSON  
ROBBINS E COTRAN - Le Basi Patologiche delle Malattie - Test di Autovalutazione - ELSEVIER  
MARIUZZI - Anatomia Patologica e Correlazioni anatomico-cliniche - PICCIN  
Presentazioni Power Point

<b>AMBIT</b>	50412-Discipline anatomico-patologiche e correlazioni anatomico-cliniche
<b>INDIVIDUAL STUDY (Hrs)</b>	90
<b>COURSE ACTIVITY (Hrs)</b>	60

**EDUCATIONAL OBJECTIVES OF THE MODULE**

Knowledge of the main pathological pictures, and the relative cell, tissue and organ lesions along with their development with reference to the most significant diseases. Comprehension of the role played by the pathologist in the clinical diagnostic process and patient management. Ability to integrate the acquired knowledge to a critical approach to diagnosis and therapeutic strategies, proving to be able to make personal judgments to solve analytical problems, develop a research-oriented attitude and be able to independently research scientific information. Ability to critically analyse and interpret the histopathological report facilitating understanding to patients.

**SYLLABUS**

<b>Hrs</b>	<b>Frontal teaching</b>
------------	-------------------------

General Pathology.  
Cell injury and adaptations.  
Thromboembolism.  
Inflammation and Repair.  
Granulomatous inflammations.  
Displasia and precancerous lesions.  
Carcinogenesis and tumor progression.  
Morphological features of neoplasia.  
Metastases.  
Diagnosis of micrometastases: role of the "Sentinel Lymphnode".  
Tumor staging.  
Aims and methods of autopsy.  
Diagnostic methodologies and techniques.  
The histological exam form Different types of biopsy.  
Collaboration between the clinician and the pathologist.  
Tissue staining techniques.  
Immunohistochemistry.  
Molecular biology applied to pathology.  
Molecular biology and tumor targeted therapy.  
Brush, squash and fine-needle aspiration cytology.  
Intraoperative examination: aims, methodology and limits.  
Cardiovascular system  
Ischemic heart disease and myocardial infarction.  
Valvular heart disease.  
Hypertrophic cardiomyopathy and heart failure.  
Myocarditis and cardiomyopathies (complications and role of the endomyocardial biopsy).  
Endocardites: different etiologies and pathophysiology.  
Cardiac arrhythmias: morphological patterns.  
Cardiac tumors.  
Congenital heart diseases.  
Pericardial diseases.  
Atherosclerosis: elementary and complicated lesions.  
Vasculitis.  
Aneurysms: classification and morphologic features.  
Circulation disorders in different organs.  
Embolism and pulmonary hypertension.  
Digestive system.  
Neoplasms of salivary glands.  
Esophagitis.  
Esophageal carcinoma.  
Chronic gastritis, acute peptic ulceration and role of the endoscopic biopsy.  
Neoplastic disease of the stomach (epithelial, stromal, lymphoma), diagnostic markers and therapy.  
Enteritis.  
Malabsorptive diseases and role of endoscopic biopsy.  
Celiac disease.  
Ischemic bowel disease.  
Inflammatory bowel disease and role of endoscopic biopsy.  
Diverticular disease and complication.  
Polyps: non-neoplastic, neoplastic and adenoma-carcinoma progression.  
Bowel malignant tumors: staging and role of biopsy.  
Acute and chronic pancreatitis and complications.  
Pancreatic carcinoma: tumor progression and histopathologic patterns.  
Acute and chronic hepatitis: role of liver biopsy, special stain techniques.  
Alcoholic liver disease.  
Cirrhosis: etiology and pathogenesis.  
Primary biliary cirrhosis, primary sclerosing cholangitis and inherited metabolic diseases.  
Liver and intrahepatic bile ducts tumors and hepatic metastasis.  
Cholecystitis, gallbladder and extrahepatic biliary tract tumors.  
Hematopoietic and lymphoid system.  
Lymphadenomegaly: etiology and pathogenesis, role of nodal biopsy.  
Diagnostic role of bone marrow biopsy.  
Neoplastic disease of the hematopoietic and lymphoid system.  
Lymphoid neoplastic proliferations: prognosis, therapy, immunologic and molecular features.  
Myeloid neoplastic proliferations: prognostic and diagnostic markers.  
Monoclonal gammopathy and progression to multiple myeloma.  
Anemia: secondary organ damage.  
Thymus neoplasms.  
Splenomegaly.  
Bones and joints and soft tissue.  
Primary and metastatic bone tumors.  
Osteomyelitis.  
Metabolic diseases of bone.  
Soft tissue tumors and sarcoma.  
Diseases of the immune system.  
Autoimmune diseases.

	Rejection of transplants: organ and tissue damage. Organ and tissue damage in autoimmune disease. Central nervous system. Cerebrovascular disease: ischemia, infarction and intracranial hemorrhage. Infections of the nervous system: meningitis, encephalitis and myelitis. Hydrocephalus. Demyelinating diseases. Neurodegenerative diseases. Tumors: morphological patterns, staging, molecular markers and stereotactic biopsy.
--	--

**MODULE  
PATHOLOGICAL ANATOMY I**

*Prof. VITO RODOLICO - Sede CHIRONE, - Sede CHIRONE*

**SUGGESTED BIBLIOGRAPHY**

KUMAR ABBAS FAUSTO ASTER – Le Basi Patologiche delle Malattie - (Elsevier) MASSON  
ROBBINS E COTRAN - Le Basi Patologiche delle Malattie - Test di Autovalutazione - ELSEVIER  
MARIUZZI - Anatomia Patologica e Correlazioni anatomo-cliniche - PICCIN  
Presentazioni Power Point

<b>AMBIT</b>	50412-Discipline anatomo-patologiche e correlazioni anatomo-cliniche
<b>INDIVIDUAL STUDY (Hrs)</b>	90
<b>COURSE ACTIVITY (Hrs)</b>	60

**EDUCATIONAL OBJECTIVES OF THE MODULE**

Knowledge of the main pathological pictures, and the relative cell, tissue and organ lesions along with their development with reference to the most significant diseases.  
Comprehension of the role played by the pathologist in the clinical diagnostic process and patient management.  
Ability to integrate the acquired knowledge to a critical approach to diagnosis and therapeutic strategies, proving to be able to make personal judgments to solve analytical problems, develop a research-oriented attitude and be able to independently research scientific information;  
Ability to critically analyse and interpret the histopathological report facilitating understanding to patients;

**SYLLABUS**

<b>Hrs</b>	<b>Frontal teaching</b>
------------	-------------------------

1.General Pathology: 10 hours  
Cell injury and adaptations (2 hours)  
Thromboembolism (1 hour)  
Inflammation and Repair (90 minutes)  
Granulomatous inflammations (30 minutes)  
Displasia and precancerous lesions (30 minutes)  
Carcinogenesis and tumor progression (40 minutes)  
Morphological features of neoplasia (40 minutes)  
Metastases (20 minutes)  
Diagnosis of micrometastases: role of the "Sentinel Lymphnode" (20 minutes)  
Tumor staging (30 minutes)  
Aims and methods of autopsy (2 hours)

2.Cardiovascular system: 11 hours  
Ischemic heart disease and myocardial infarction (90 minutes)  
Valvular heart disease (20 minutes)  
Hypertrophic cardiomyopathy and heart failure (30 minutes)  
Myocarditis and cardiomyopathies (complications and role of the endomyocardial biopsy) (2 hours)  
Endocarditides: different etiologies and pathophysiology (1 hour)  
Cardiac arrhythmias: morphological patterns (20 minutes)  
Cardiac tumors (20 minutes)  
Congenital heart diseases (2 hours)  
Pericardial diseases (30 minutes)  
Atherosclerosis: elementary and complicated lesions (1 hour)  
Vasculitis (30 minutes)  
Aneurysms: classification and morphologic features (20 minutes)  
Circulation disorders in different organs (20 minutes)  
Embolism and pulmonary hypertension (20 minutes)

3.Respiratory tract: 11 hours  
Nasal cavity and nasopharynx: inflammatory and neoplastic diseases (30 minutes)  
Larynx: premalignant lesions and tumors (1 hour)  
Lung non-neoplastic lesions: atelectasis, pneumonias, bronchopneumonia, abscesses, acute bronchitis, bronchiectasis (1 hour)  
Morphological patterns, evolution and clinical outcomes of pulmonary tuberculosis (2 hours)  
Obstructive lung diseases (emphysema) (30 minutes)  
Different etiologies and pathophysiology of interstitial lung diseases (1 hour)  
Morphological features of pneumoconioses (1 hour)  
Primitive and metastatic lung tumors, stadiation and diagnostic role of bronchoscopic alveolar lavage and transbronchial biopsy (2 hours)  
Pleural diseases and mesothelioma (2 hours)

4.Urinary system: 8 hours  
Congenital anomalies of the urinary system: natural history and morphological patterns (30 minutes)  
Diseases affecting tubules and interstitium: tubulointerstitial nephritis, acute tubular injury and drug-induced interstitial nephritis (1 hour)  
Glomerular diseases and diagnostic role of renal biopsy (1 hour)  
Morphologic features, immunopathology and classification of glomerular diseases (1 hour)  
Kidney tumors: classification and stadiation (90 minutes)  
Embryonal kidney tumors (1 hours)  
Bladder and urinary tract non-neoplastic disease (30 minutes)  
Bladder malignant neoplasm: stadiation and role of cytology and biopsy (90 minutes)

5.Male genital system: 6 hours  
Prostatitis, benign prostatic hyperplasia and complications (1 hour)  
Carcinoma of the prostate: natural history, morphological patterns, spread and prognosis (2 hour)  
Testicular neoplasms: classification (1 hour)  
Testicular and epididymis neoplasms: morphological patterns and prognostic markers (1 hour)  
Epididymitis and orchitis (30 minutes)  
Penis diseases (30 minutes)

6.Female genital system and breast: 14 hours  
Vulvitis, vaginitis and cervicitis  
Cervical intraepithelial neoplasia (CIN) and cytologic features (pap test) (2 hours)  
Neoplasia of the cervix (eso- and endocervix) (1 hour)  
Endometritis (1 hour)  
Endometriosis (30 minutes)  
Endocervical and endometrial polyps (30 minutes)  
Endometrial carcinoma (1 hour)  
Non-epithelial tumors of the uterus (1 hour)  
Tumors of the ovary: classification, natural history and morphological patterns (2 hours)  
Placental diseases: hydatidiform mole and choriocarcinoma (1 hour)  
Non-neoplastic diseases of the breast: diagnostic algorithm of the mammary nodule and FNA biopsy (90 minutes)  
Benign and malignant neoplasms of the breast: natural history, progression and complications, morphological patterns, stadiation and prognostic role of hormonal receptors expression and other molecular marks (2 hours 30 minutes)

**MODULE  
PATHOLOGICAL ANATOMY II**

*Prof.ssa ADA MARIA FLORENA - Sede CHIRONE, - Sede CHIRONE*

**SUGGESTED BIBLIOGRAPHY**

Kumar, Abbas, Aster – Pathologic Basis of Disease  
Masson, Robbins, Cotran – Pathologic Basis of Disease: self assessment and review  
Mariuzzi – Anatomia patologica e correlazioni anatomo-cliniche  
Powerpoint slides

<b>AMBIT</b>	50412-Discipline anatomo-patologiche e correlazioni anatomo-cliniche
--------------	--

<b>INDIVIDUAL STUDY (Hrs)</b>	90
-------------------------------	----

<b>COURSE ACTIVITY (Hrs)</b>	60
------------------------------	----

**EDUCATIONAL OBJECTIVES OF THE MODULE**

Knowledge of the main pathological pictures, and the relative cell, tissue and organ lesions along with their development with reference to the most significant diseases.

Comprehension of the role played by the pathologist in the clinical diagnostic process and patient management.

Ability to integrate the acquired knowledge to a critical approach to diagnosis and therapeutic strategies, proving to be able to make personal judgments to solve analytical problems, develop a research-oriented attitude and be able to independently research scientific information;

Ability to critically analyse and interpret the histopathological report facilitating understanding to patients;

**SYLLABUS**

<b>Hrs</b>	<b>Frontal teaching</b>
------------	-------------------------



1.Diagnostic methodologies and techniques: 5 hours  
 The histological exam form (30 minutes)  
 Different types of biopsy (1 hour)  
 Collaboration between the clinician and the pathologist (20 minutes)  
 Tissue staining techniques (30 minutes)  
 Immunohistochemistry (40 minutes)  
 Molecular biology applied to pathology (30 minutes)  
 Molecular biology and tumor targeted therapy (30 minutes)  
 Brush, squash and fine-needle aspiration cytology (???)  
 Intraoperative examination: aims, methodology and limits (30 minutes)

2.Digestive system: 24 hours  
 Neoplasms of salivary glands (2 hours)  
 Esophagitis (20 minutes)  
 Esophageal carcinoma (40 minutes)  
 Chronic gastritis, acute peptic ulceration and role of the endoscopic biopsy (1 hour)  
 Neoplastic disease of the stomach (epithelial, stromal, lymphoma), diagnostic markers and therapy (3 hours)  
 Enteritis (30 minutes)  
 Malabsorptive diseases and role of endoscopic biopsy (20 minutes)  
 Celiac disease (30 minutes)  
 Ischemic bowel disease (20 minutes)  
 Inflammatory bowel disease and role of endoscopic biopsy (2 hours)  
 Diverticular disease and complication (20 minutes)  
 Polyps: non-neoplastic, neoplastic and adenoma-carcinoma progression (1 hour)  
 Bowel malignant tumors: staging and role of biopsy (2 hours)  
 Acute and chronic pancreatitis and complications (1 hour)  
 Pancreatic carcinoma: tumor progression and histopathologic patterns (2 hours)  
 Acute and chronic hepatitis: role of liver biopsy, special stain techniques (2 hours)  
 Alcoholic liver disease (30 minutes)  
 Cirrhosis: etiology and pathogenesis (1 hour)  
 Primary biliary cirrhosis, primary sclerosing cholangitis and inherited metabolic diseases (30 minutes)  
 Liver and intrahepatic bile ducts tumors and hepatic metastasis (2 hours)  
 Cholecystitis, gallbladder and extrahepatic biliary tract tumors (1 hour)

3.Hematopoietic and lymphoid system: 13 hours  
 Lymphadenomegaly: etiology and pathogenesis, role of nodal biopsy (2 hours)  
 Diagnostic role of bone marrow biopsy (30 minutes)  
 Neoplastic disease of the hematopoietic and lymphoid system (30 minutes)  
 Lymphoid neoplastic proliferations: prognosis, therapy, immunologic and molecular features (3 hours)  
 Myeloid neoplastic proliferations: prognostic and diagnostic markers (2 hours)  
 -----  
 -----  
 Monoclonal gammopathy and progression to multiple myeloma (30 minutes)  
 Anemia: secondary organ damage (20 minutes)  
 Thymus neoplasms (20 minutes)  
 Splenomegaly (20 minutes)

4.Endocrine system: 7 hours  
 Hyperpituitarism and hypopituitarism (20 minutes)  
 Pituitary neoplasms (20 minutes)  
 Hyperthyroidism and hypothyroidism (30 minutes)  
 Chronic thyroiditis (30 minutes)  
 Thyroid neoplasms and role of fine-needle aspiration cytology (2 hours)  
 Hyperparathyroidism and hypoparathyroidism (1 hour)  
 Endocrine pancreas: diabetes mellitus and secondary organ dysfunction (20 minutes)  
 Pancreatic endocrine tumors (30 minutes)  
 Adrenal insufficiency (30 minutes)  
 Adrenocortical hyperfunction (30 minutes)  
 Adrenocortical and adrenal medulla neoplasms (30 minutes)

5.Bones and joints and soft tissue: 4 hours  
 Primary and metastatic bone tumors (1 hour 20 minutes)  
 Osteomyelitis (20 minutes)  
 Metabolic diseases of bone (20 minutes)  
 Soft tissue tumors and sarcoma (2 hours)

6.Diseases of the immune system: 4 hours  
 Autoimmune diseases (30 minutes)  
 Rejection of transplants: organ and tissue damage (30 minutes)  
 Organ and tissue damage in autoimmune disease (3 hours)

7.Central nervous system: 11 hours  
 Cerebrovascular disease: ischemia, infarction and intracranial hemorrhage (2 hours)  
 Infections of the nervous system: meningitis, encephalitis and myelitis (2 hours)  
 Hydrocephalus (30 minutes)  
 Demyelinating diseases (1 hour)  
 Neurodegenerative diseases (2 hours 30 minutes)  
 Tumors: morphological patterns, staging, molecular markers and stereotactic biopsy (3 hours)

8.Skin: 4 hours

	Skin tumors (1 hours) Melanocytic lesions and progression to melanoma (1 hour) Melanoma: natural history, morphological features and staging (2 hours)
--	--

**MODULE  
PATHOLOGICAL ANATOMY II**

*Prof.ssa ANNA MARTORANA - Sede HYPATIA, - Sede HYPATIA*

**SUGGESTED BIBLIOGRAPHY**

- 1) Mariuzzi GM: Anatomia Patologica e correlazioni anatomo-cliniche. PICCIN, Padova, 2006.
- 2) Robbins e Cotran: Le basi patologiche delle malattie. 8° edizione italiana. Elsevier, Milano 2010.
- 3) Rubin E. Corstein F. et al: Patologia – Fondamenti clinicopatologici in medicina- Casa Editrice Ambrosiana, Milano, 2006

<b>AMBIT</b>	50412-Discipline anatomo-patologiche e correlazioni anatomo-cliniche
<b>INDIVIDUAL STUDY (Hrs)</b>	90
<b>COURSE ACTIVITY (Hrs)</b>	60

**EDUCATIONAL OBJECTIVES OF THE MODULE**

Knowledge of the main pathological pictures, and the relative cell, tissue and organ lesions along with their development with reference to the most significant diseases.

Comprehension of the role played by the pathologist in the clinical diagnostic process and patient management.

Ability to integrate the acquired knowledge to a critical approach to diagnosis and therapeutic strategies, proving to be able to make personal judgments to solve analytical problems, develop a research-oriented attitude and be able to independently research scientific information.

Ability to critically analyse and interpret the histopathological report facilitating understanding to patients.

**SYLLABUS**

<b>Hrs</b>	<b>Frontal teaching</b>
------------	-------------------------

General Pathology.  
Cell injury and adaptations.  
Thromboembolism.  
Inflammation and Repair.  
Granulomatous inflammations.  
Displasia and precancerous lesions.  
Carcinogenesis and tumor progression.  
Morphological features of neoplasia.  
Metastases.  
Diagnosis of micrometastases: role of the "Sentinel Lymphnode".  
Tumor staging.  
Aims and methods of autopsy.  
Respiratory tract  
Nasal cavity and nasopharynx: inflammatory and neoplastic diseases.  
Larynx: premalignant lesions and tumors.  
Lung non-neoplastic lesions: atelectasis, pneumonias, bronchopneumonia, abscesses, acute bronchitis, bronchiectasis.  
Morphological patterns, evolution and clinical outcomes of pulmonary tuberculosis.  
Obstructive lung diseases (emphysema).  
Different etiologies and pathophysiology of interstitial lung diseases.  
Morphological features of pneumoconioses.  
Primitive and metastatic lung tumors, stadiation and diagnostic role of bronchoscopic alveolar lavage and transbronchial biopsy.  
Pleural diseases and mesothelioma.  
Urinary system.  
Congenital anomalies of the urinary system: natural history and morphological patterns.  
Diseases affecting tubules and interstitium: tubulointerstitial nephritis, acute tubular injury and drug-induced interstitial nephritis.  
Glomerular diseases and diagnostic role of renal biopsy.  
Morphologic features, immunopathology and classification of glomerular diseases.  
Kidney tumors: classification and stadiation.  
Embryonal kidney tumors.  
Bladder and urinary tract non-neoplastic disease.  
Bladder malignant neoplasm: stadiation and role of cytology and biopsy.  
Male genital system.  
Prostatitis, benign prostatic hyperplasia and complications.  
Carcinoma of the prostate: natural history, morphological patterns, spread and prognosis.  
Testicular neoplasms: classification.  
Testicular and epididymis neoplasms: morphological patterns and prognostic markers.  
Epididymitis and orchitis.  
Penis diseases.  
Female genital system and breast  
Vulvitis, vaginitis and cervicitis  
Cervical intraepithelial neoplasia (CIN) and cytologic features (pap test).  
Neoplasia of the cervix (eso- and endocervix).  
Endometritis.  
Endometriosis.  
Endocervical and endometrial polyps.  
Endometrial carcinoma.  
Non-epithelial tumors of the uterus.  
Tumors of the ovary: classification, natural history and morphological patterns  
Placental diseases: hydatidiform mole and choriocarcinoma  
Non-neoplastic diseases of the breast: diagnostic algorithm of the mammary nodule and FNA biopsy.  
Benign and malignant neoplasms of the breast: natural history, progression and complications, morphological patterns, stadiation and prognostic role of hormonal receptors expression and other molecular markers.  
Endocrine system.  
Hyperpituitarism and hypopituitarism.  
Pituitary neoplasms.  
Hyperthyroidism and hypothyroidism.  
Chronic thyroiditis.  
Thyroid neoplasms and role of fine-needle aspiration cytology.  
Hyperparathyroidism and hypoparathyroidism.  
Endocrine pancreas: diabetes mellitus and secondary organ dysfunction.  
Pancreatic endocrine tumors.  
Adrenal insufficiency.  
Adrenocortical hyperfunction.  
Adrenocortical and adrenal medulla neoplasms.  
Skin  
Skin tumors.  
Melanocytic lesions and progression to melanoma.  
Melanoma: natural history, morphological features and staging.

**MODULE  
PATHOLOGICAL ANATOMY I**

*Prof.ssa ANNA MARTORANA - Sede IPPOCRATE, - Sede IPPOCRATE*

**SUGGESTED BIBLIOGRAPHY**

COTRAN KUMAR ROBBINS - Le Basi Patologiche delle Malattie - PICCIN  
MARIUZZI - Anatomia Patologica e Correlazioni anatomo-cliniche - PICCIN  
Presentazioni Power Point

<b>AMBIT</b>	50412-Discipline anatomo-patologiche e correlazioni anatomo-cliniche
<b>INDIVIDUAL STUDY (Hrs)</b>	90
<b>COURSE ACTIVITY (Hrs)</b>	60

**EDUCATIONAL OBJECTIVES OF THE MODULE**

- Know the basic concepts of both the pathogenetic mechanisms of morphological substrate, defined as alterations of organs, tissues, cells and sub-cellular structures, main pathological pictures to understand the clinical correlates (anatomical and clinical correlations).
  - Knowing the fundamental role of Anatomical Pathology within the clinical decision-making from which springs the cooperation between clinician and pathologist.
- Precipui tasks of discipline are:
- Make a diagnosis about the nature of the disease process
  - Assess the stage of development of the disease process, defining prognostic parameters, ie the odds' evolutionary lesion
  - Direct the therapeutic choices based on the stage of disease, based on parameters predictive of response to specific treatments. Prerequisite for obtaining this training objective is the ability to interpretate the pathologic reports (cytological, histological, molecular biology).
  - Know the indications and limitations of some of the pathological examination methods (intraoperative extemporaneous examination; exfoliative cytology, for affixing needle aspiration and fine needle, needle biopsies) as well as diagnostic implications concerning endoscopic biopsies, surgical biopsies, the surgical specimens for staging, the diagnostic examination necropsy: in most cases is sufficient to pathologist observation under the optical microscope, of cytological smears or routinely stained histological sections, to make the diagnosis; in a significant number of cases instead is necessary a supplement to the routine colorations with other diagnostic methods such as special stains, immunohistochemistry and other molecular techniques, electron microscopy and molecular biology techniques.
  - Understand the relationship between morphology and clinical as well as the impact that the main disease can have in the various districts of the organism in order to obtained a summary of anatomical clinical as a whole. Prerequisite for this training objective is the frequency of autopsy room to attend to some diagnostic necropsy findings. The necropsy diagnostic examination also provides students with the knowledge of how complex and can be, especially with the advance of the age, pathological profile of the patient.

N.B. Given the division in two-semester of the Integrated Course and being the teachers (Prof. Vito Franco, Prof. Vito Rodolico) pertaining to the same SSD (MED / 08), the schedule of lessons each teacher is distributed in both semesters.

**SYLLABUS**

Hrs	Frontal teaching
8	1. Anatomia Patologica Generale: Aspetti morfologici dell'adattamento e del danno cellulare Quadri morfologici delle alterazioni degenerative Aspetti morfologici delle alterazioni trombo-emboliche Caratteristiche cito-istologiche delle flogosi acute e croniche e degli esiti Quadri morfologici delle flogosi croniche granulomatose Basi morfologiche della displasia e delle lesioni precancerose Basi anatomiche dell'oncogenesi e della progressione tumorale Caratteristiche cito-istologiche delle neoplasie Basi anatomo-cliniche delle metastasi Diagnosi delle micrometastasi: ruolo del linfonodo sentinella Principi di stadiazione dei tumori

7	<p>2. Metodologie e Tecniche Diagnostiche</p> <p>La richiesta anatomo-patologica</p> <p>Indicazioni sui diversi tipi di biopsia</p> <p>Ruolo della collaborazione tra clinico ed anatomo-patologo</p> <p>Cenni sulle principali tecniche di colorazione cito-istologiche</p> <p>Ruolo dell' immunistochimica</p> <p>Principali tecniche biomolecolari applicate all'anatomia patologica</p> <p>Applicazioni anatomo-patologiche di tecniche bio-molecolari con riferimento alle terapie bersaglio dei tumori</p> <p>Indicazioni e limiti della citologia esfoliativa, per apposizione e per agoaspirazione</p> <p>Finalita, metodologia e limiti dell' esame intraoperatorio</p> <p>Finalita' e metodologia del riscontro diagnostico</p> <p>Allestimento dei preparati citologici ed istologici</p> <p>Compilazione di una richiesta per esame cito-istologico</p> <p>Allestimento di preparati cito-istochimici ed immunocito-istochimici</p> <p>Estrazione di DNA da tessuto ed esecuzione di tecniche di PCR</p> <p>Osservare tecniche di campionamento macroscopico degli organi</p> <p>Osservare preparati istologici al microscopio ottico</p>
15	<p>3. Apparato cardio-circolatorio</p> <p>Quadri morfologici della cardiopatia ischemica e dell'infarto miocardico</p> <p>Substrati morfologici delle valvulopatie</p> <p>Quadri morfologici dell'ipertrofia miocardica e dello scompenso cardiaco</p> <p>Quadri morfologici delle miocarditi e delle cardiomiopatie (complicanze e ruolo della biopsia endomiocardica)</p> <p>Quadri morfologici delle endocarditi in relazione alle differenti etiopatogenesi</p> <p>Substrati morfologici delle aritmie cardiache</p> <p>Inquadramento generale dei tumori cardiaci</p> <p>Basi anatomiche delle principali cardiopatie congenite</p> <p>Patologia del pericardio</p> <p>Morfologia delle lesioni elementari e di quelle avanzate/complicate dell'aterosclerosi</p> <p>Quadri anatomo patologici delle principali vasculiti</p> <p>Classificazione ed aspetti morfologici degli aneurismi</p> <p>Quadri morfologici dei disturbi di circolo nei vari organi</p> <p>Alterazioni morfologiche dei disturbi del circolo polmonare: embolia e ipertensione polmonare</p>
15	<p>4. Apparato respiratorio</p> <p>Patologia flogistica e neoplastica delle cavita' nasali e del rinofaringe</p> <p>Morfologia delle lesioni pre-neoplastiche e delle neoplasie della laringe</p> <p>Anatomia patologica e patogenesi di: atelettasia, polmoniti, broncopolmoniti, ascesso polmonare, bronchiti acute, bronchiectasie</p> <p>Quadri morfologici della tubercolosi polmonare in relazione agli stadi evolutivi dell'infezione e degli esiti</p> <p>Quadri morfologici della bronco-pneumopatia cronica ostruttiva (enfisema)</p> <p>Quadri morfologici delle patologie interstiziali del polmone in relazione alle differenti etiopatogenesi</p> <p>Quadri morfologici delle principali pneumoconiosi</p> <p>Quadri morfologici dei tumori primitivi e metastatici del polmone, con riferimento agli elementi utili alla stadiazione anatomo-clinica, ruolo diagnostico della broncoscopia con lavaggio bronco-alveolare e biopsia trans bronchiale; principali marcatori tumorali.</p> <p>Quadri morfologici delle patologie della pleura con particolare riferimento ai mesoteliomi</p> <p>Quadri citologici utili alla diagnosi dei preparati da liquido pleurico</p>
10	<p>5. Apparato urinario</p> <p>Storia naturale e quadri morfologici delle principali anomalie congenite nefro-urologiche</p> <p>Principali quadri morfologici e complicanze di: tubulopatie, nefriti interstiziali, nefropatie tossiche e da farmaci</p> <p>Quadri morfologici delle glomerulopatie primitive e secondarie e ruolo diagnostico della biopsia renale</p> <p>Basi morfologiche ed immunopatologiche delle glomerulopatie e principi della classificazione</p> <p>Quadri morfologici dei tumori del rene con riferimento agli elementi utili alla classificazione ed alla stadiazione anatomo-clinica</p> <p>Cenni sulle principali neoplasie embrionarie del rene</p> <p>Patologia non neoplastica della vescica e delle vie urinarie</p> <p>Quadri morfologici del carcinoma della vescica, con riferimento alla storia naturale e alla stadiazione, e ruolo dei rilievi citologici e istologici mediante cistoscopia</p>

10	<p>6.Apparato emopoietico  Principali quadri morfologici delle linfadenomegalie in relazione alle diverse etiopatogenesi: ruolo ed indicazioni alla biopsia linfonodale. Linfadeniti.  Ruolo diagnostico della biopsia osteomidollare nella patologia dell'apparato emopoietico  Basi e principi delle classificazioni delle neoplasie dell'apparato emopoietico  Classificazione e morfologia dei processi linfoproliferativi: caratteristiche immunologiche e molecolari con riferimento alla prognosi e alla terapia  Inquadramento generale e cenni sulla istopatologia delle leucemie acute: principali marcatori diagnostici e prognostici  Connotati comuni e specifici morfologici, immunologici e molecolari delle neoplasie mieloproliferative con riferimento a diagnosi, prognosi e terapia  Quadri morfologici ed immunostochimici delle patologie immunoproliferative in riferimento alla prognosi ed alla terapia  Oncogenesi delle gammopatie monoclonali: meccanismi di progressione verso il mieloma multiplo  Principali conseguenze d'organo nelle anemie e nei processi mieloproliferativi acuti e cronici  Inquadramento e classificazione dei tumori timici  Quadri morfologici e diagnosi differenziale delle splenomegalie</p>
10	<p>1.Apparato digerente  Classificazione dei tumori delle ghiandole salivari  Quadri morfologici delle esofagiti  Quadri morfologici e complicità del carcinoma dell'esofago  Quadri morfologici delle gastriti croniche e dell'ulcera peptica e ruolo della biopsia endoscopica  Quadri anatomo-clinici dei tumori gastrici e ruolo della biopsia endoscopica  Inquadramento istogenetico e diagnosi differenziale dei tumori gastrici (epiteliali, stromali, linfoproliferativi) con riferimento ai marcatori diagnostici ed alle principali applicazioni terapeutiche  Quadri morfologici delle principali enteriti  Inquadramento generale e quadri morfologici delle sindromi da malassorbimento: ruolo della biopsia endoscopica  Quadro morfologico, parametri diagnostici istopatologici e complicità della malattia celiaca  Quadri morfologici della patologia ischemica dell'intestino  Caratteristiche morfologiche della malattia infiammatoria cronica dell'intestino e delle complicità: ruolo della biopsia endoscopica  Basi morfologiche della malattia diverticolare e delle complicità  Polipi intestinali non neoplastici e adenomatosi con specifico riferimento alla poliposi familiare e progressione adenoma-carcinoma  Tumori maligni dell'intestino: criteri per la stadiazione anatomo-clinica e ruolo diagnostico e prognostico della biopsia  Quadri anatomo-patologici delle pancreatiti acute e croniche e complicità  Quadri morfologici delle neoplasie del pancreas esocrino  Progressione tumorale e quadri istopatologici dell' adenocarcinoma del pancreas esocrino  Quadri morfologici dell'epatiti acute e croniche: ruolo diagnostico e prognostico della biopsia epatica e delle principali tecniche di colorazione  Istopatologia dell'epatopatia alcolica con particolare riferimento agli stadi evolutivi  Quadri morfologici ed alterazioni istopatologiche delle cirrosi epatiche in riferimento ai diversi meccanismi etiopatogenetici  Inquadramento generale e principali quadri morfologici di cirrosi biliare, colangite sclerosante e delle epatopatie su base genetica  Quadri morfologici dei tumori epato- colangiocellulari e delle metastasi epatiche  Storia naturale, quadri morfologici e complicità delle colecistiti, dei tumori della colecisti e delle vie biliari extraepatiche</p>
10	<p>2.Apparato genitale maschile  Quadri morfologici della ipertrofia prostatica e delle prostatiti con riferimento alle Complicità  Anatomia patologica del carcinoma della prostata con riferimento ai quadri istologici in relazione a prognosi, storia naturale e diffusione  Classificazione istogenetica delle neoplasie del testicolo  Quadri morfologici dei tumori del testicolo e dell'epididimo e principali marcatori prognostici  Cenni sulle orchie epididimiti  Cenni sui quadri anatomo-patologici della patologia del pene</p>

10	<p>3.Apparato genitale femminile</p> <p>Principali problematiche evolutive dei tumori ginecologici dal punto di vista anatomo-patologico</p> <p>Caratteristiche morfologiche della patologia flogistica di vulva, vagina e cervice uterina</p> <p>Progressione tumorale delle neoplasie escervicali (Neoplasia Intraepiteliale Cervicale): ruolo della citologia esfoliativa</p> <p>Le neoplasie della cervice uterina (eso- ed endocervice)</p> <p>Quadri morfologici della patologia flogistica e disfunzionale dell'endometrio</p> <p>Quadri anatomo-patologici dell'endometriosi nei diversi organi</p> <p>Lesioni polipoidi della cervice e del corpo dell'utero</p> <p>Quadri morfologici del carcinoma dell'endometrio in relazione con la storia naturale</p> <p>Caratteristiche morfologiche delle neoplasie non epiteliali dell'utero</p> <p>Inquadramento, classificazione, storia naturale e quadri morfologici dei tumori ovarici</p> <p>Generalita' sulla patologia della placenta: mola vescicolare, corio carcinoma</p> <p>Patologia non neoplastica della mammella: iter diagnostico del nodulo mammario con particolare riferimento ruolo della citologia agoaspirativa</p> <p>Tumori benigni e maligni della mammella: storia naturale, progressione e complicita, quadri morfologici, stadiazione; ruolo - anche come fattori di prognosi - dell'istopatologia, dello studio dei recettori ormonali e di altri marcatori molecolari</p>
10	<p>4.Apparato endocrino</p> <p>Quadri morfologici degli iper- e ipopituitarismi</p> <p>Inquadramento delle neoplasie dell'ipofisi</p> <p>Storia naturale e quadri morfologici degli ipo-ed ipertiroidismi</p> <p>Quadri morfologici delle tiroiditi croniche</p> <p>Correlazioni anatomo-cliniche e quadri morfologici delle neoplasie benigne e maligne della tiroide: ruolo della citologia agoaspirativa nell'iter diagnostico del nodulo tiroideo</p> <p>Basi morfologiche degli ipo- ed iperparatiroidismi in relazioni ai quadri clinici e neoplasie delle paratiroidi</p> <p>Quadro istologico del pancreas e degli altri organi bersaglio delle complicita d'organo nelle varie fasi della storia naturale del diabete</p> <p>Inquadramento delle neoplasie del pancreas endocrino</p> <p>Quadri morfologici, storia naturale e complicita delle insufficienze surrenaliche</p> <p>Quadri morfologici degli ipercorticosurrenalismi e correlazioni anatomo-cliniche</p> <p>Inquadramento delle neoplasie della corticale e midollare del surrene</p>
5	<p>5.Apparato locomotore</p> <p>Classificazione e diagnosi differenziale dei tumori primitivi e metastatici dello scheletro: correlazioni anatomo-radiologiche e quadri istopatologici</p> <p>Quadri morfologici delle osteomieliti in relazione alle diverse eziopatogenesi</p> <p>Quadri morfologici delle principali patologie metaboliche dell'osso</p> <p>Inquadramento generale delle distrofie muscolari e miopatie: indicazioni alla biopsia muscolare sulla base del quadro istopatologico</p> <p>Inquadramento generale dei tumori dei tessuti molli con particolare riferimento all'istogenesi e descrizione dei quadri morfologici dei principali sarcomi</p>
5	<p>6.Patologia immunitaria</p> <p>Principali substrati anatomo-patologici nei processi autoimmunitari</p> <p>Quadri istologici dei danni tissutali e d'organo nelle reazioni di rigetto</p> <p>Quadri anatomo-patologici delle lesioni d'organo nelle principali patologie autoimmuni</p>
10	<p>7.Sistema nervoso</p> <p>Quadri morfologici dei disturbi di circolo cerebrale: ematomi, emorragie, infarto</p> <p>Quadri morfologici in relazione all'etiopatogenesi della patologia infettiva e infiammatoria delle meningi, dell'encefalo e del midollo spinale</p> <p>Quadro morfologico dell'idrocefalo e correlazioni anatomo-cliniche</p> <p>Inquadramento generale, correlazioni anatomo-cliniche e quadri morfologici delle malattie demielinizzanti</p> <p>Correlazioni anatomo-cliniche e quadri morfologici delle principali malattie Neurodegenerative</p> <p>Classificazione dei tumori del SNC con riferimento ai quadri morfologici, alla stadiazione ed al ruolo dei marcatori molecolari nella progressione tumorale: ruolo e limiti della biopsia stereotassica</p>
5	<p>8.Apparato cutaneo e tessuti molli</p> <p>Generalita' e quadri morfologici dei piu' comuni tumori dell'epidermide</p> <p>Classificazione e quadri istopatologici dei nevi con particolare riferimento all'evoluzione verso un melanoma</p> <p>Generalita, storia naturale, quadri istopatologici e stadiazione del melanoma.</p> <p>Generalita e classificazione dei tumori dei tessuti molli.</p>
<b>Hrs</b>	<b>Practice</b>
15	<p>TIROCINIO</p> <p>Attività teorico-pratica: 1) frequenza in laboratorio di macroscopia al fine di assistere alle tecniche di campionamento degli organi. 2) Osservazione di preparati istologici al microscopio ottico. 3) Apprendimento di principi di allestimento di preparati cito e istologici. 4) Compilazione di una richiesta per esame cito-istologico.</p>



**MODULE  
PATHOLOGICAL ANATOMY II**

*Prof.ssa DANIELA CABIBI - Sede IPPOCRATE, - Sede IPPOCRATE*

**SUGGESTED BIBLIOGRAPHY**

COTRAN KUMAR ROBBINS - Le Basi Patologiche delle Malattie - PICCIN  
MARIUZZI - Anatomia Patologica e Correlazioni anatomo-cliniche - PICCIN

<b>AMBIT</b>	50412-Discipline anatomo-patologiche e correlazioni anatomo-cliniche
<b>INDIVIDUAL STUDY (Hrs)</b>	90
<b>COURSE ACTIVITY (Hrs)</b>	60

**EDUCATIONAL OBJECTIVES OF THE MODULE**

Basic concepts of the pathogenetic mechanisms and morphological aspects, defined as alterations of organs, tissues, cells and sub-cellular structures. Main pathological pictures needed to understand the clinical-pathological correlations and diagnosis of various diseases - Assess the stage of development of the disease process, defining prognostic parameters and evolutionary lesion - Direct the therapeutic choices based on the stage of disease, based on parameters predictive of response to specific treatments. how to interpretate the pathologic reports (cytological, histological, molecular biology). - the indications and limitations of some of the pathological examination methods (intraoperative frozen section examinations; exfoliative cytology, for affixing needle aspiration and fine needle, needle biopsies) as well as diagnostic implications concerning endoscopic biopsies, surgical biopsies, the surgical specimens for staging, the diagnostic examination necropsy. Use of ancillary studies (special stains, immunohistochemistry and other molecular techniques, electron microscopy and molecular biology techniques) to perform diagnosis - Understand the relationship between morphology and clinical as well as the impact that the main disease can have in the various districts of the organism in order to obtained a summary of anatomical clinical as a whole. Prerequisite for this training objective is the frequency of autopsy room to attend to some diagnostic necropsy findings. The necropsy diagnostic examination also provides students with the knowledge of how complex and can be, especially with the advance of the age, pathological profile of the patient. N.B. Given the division in two-semester of the Integrated Course and being the teachers (Prof. Vito Franco, Prof. Vito Rodolico) pertaining to the same SSD (MED / 08), the schedule of lessons each teacher is distributed in both semesters.

**SYLLABUS**

Hrs	Frontal teaching
10	1.General Pathology: 10 hours Cell injury and adaptations (2 hours) Thromboembolism (1 hour) Inflammation and Repair (90 minutes) Granulomatous inflammations (30 minutes) Displasia and precancerous lesions (30 minutes) Carcinogenesis and tumor progression (40 minutes) Morphological features of neoplasia (40 minutes) Metastases (20 minutes) Diagnosis of micrometastases: role of the "Sentinel Lymphnode" (20 minutes) Tumor staging (30 minutes) Aims and methods of autopsy (2 hours)
5	1.Diagnostic methodologies and techniques: 5 hours The histological exam form (30 minutes) Different types of biopsy (1 hour) Collaboration between the clinician and the pathologist (20 minutes) Tissue staining techniques (30 minutes) Immunohistochemistry (40 minutes) Molecular biology applied to pathology (30 minutes) Molecular biology and tumor targeted therapy (30 minutes) Brush, squash and fine-needle aspiration cytology (???) Intraoperative examination: aims, methodology and limits (30 minutes)
8	4.Urinary system: 8 hours Congenital anomalies of the urinary system: natural history and morphological patterns (30 minutes) Diseases affecting tubules and interstitium: tubulointerstitial nephritis, acute tubular injury and drug-induced interstitial nephritis (1 hour) Glomerular diseases and diagnostic role of renal biopsy (1 hour) Morphologic features, immunopathology and classification of glomerular diseases (1 hour) Kidney tumors: classification and stadiation (90 minutes) Embryonal kidney tumors (1 hours) Bladder and urinary tract non-neoplastic disease (30 minutes) Bladder malignant neoplasm: stadiation and role of cytology and biopsy (90 minutes)

14	6.Female genital system and breast: 14 hours Vulvitis, vaginitis and cervicitis Cervical intraepithelial neoplasia (CIN) and cytologic features (pap test) (2 hours) Neoplasia of the cervix (eso- and endocervix) (1 hour) Endometritis (1 hour) Endometriosis (30 minutes) Endocervical and endometrial polyps (30 minutes) Endometrial carcinoma (1 hour) Non-epithelial tumors of the uterus (1 hour) Tumors of the ovary: classification, natural history and morphological patterns (2 hours) Placental diseases: hydatidiform mole and choriocarcinoma (1 hour) Non-neoplastic diseases of the breast: diagnostic algorithm of the mammary nodule and FNA biopsy (90 minutes)
12	3.Hematopoietic and lymphoid system: 12 hours Lymphadenomegaly: etiology and pathogenesis, role of nodal biopsy (1 hour) Diagnostic role of bone marrow biopsy (30 minutes) Neoplastic disease of the hematopoietic and lymphoid system (30 minutes) Lymphoid neoplastic proliferations: prognosis, therapy, immunologic and molecular features (3 hours) Myeloid neoplastic proliferations: prognostic and diagnostic markers (2 hours) ----- ----- Monoclonal gammopathy and progression to multiple myeloma (30 minutes) Anemia: secondary organ damage (20 minutes) Thymus neoplasms (20 minutes) Splenomegaly (20 minutes)
<b>Hrs</b>	<b>Practice</b>
15	Cyto-histopathologic exam request compilation H&E stain and immunohistochemistry techniques DNA extraction from tissues and PCR techniques Observation of macroscopic sampling