Objectives: Pathology of Respiratory, Cardiovascular, Musculoskeletal, Endocrine and Lymphoreticular Systems (MED3119)

Concepts	Objectives	Time	Activity	Department
	The students should be able to;			
2015-SBM/MED3119/01 Tuberculosis	1. Recall the general pathology of chronic inflammation 2. Describe the aetiopathogenesis of I ry tuberculosis and post primary tuberculosis 2. Recall the lesions in the lung in tuberculosis and explain their pathogenesis. 3. **Enumerate the diagnostic tests for tuberculosis and explain the basis of these investigations**.	1hr	Lecture	Medicine
2015-SBM/MED3119/02 Obstructive airway diseases I	1. Describe the aetiopathogenesis of COPD 2. Describe the pathology in CPOD disease progression with clinical correlations. 3. List the complications of COPD and causes of death. 4. Describe the pathogenesis of asthma. (Recall type 1 hypersensitivity reaction) 5. Describe the pathological changes in lungs with a person with long standing bronchial asthma. 6. Explain the differences between beonchial asthma and COPD. 7. Describe the atiopathogenesis, clinical manifestations and complications of bronchiectasis	3hrs	Lecture	Pathology

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2015-SBM/MED3119/03 Pneumonia and lung abscess	1. Recall the infective microorganisms 2. Explain the aetiology and pathogenesis of lobar and bronchopneumonia 3. Describe the macroscopic and microscopic features of the lung and bronchi in both types of pneumonia 4. Describe the pathological and clinical effects of pneumonia 5. Describe the sequelae and complications of pneumonia 6. Describe aetiopathogenesis of lung abscess			
2015-SBM/MED3119/04 Restrictive lung diseases (interstitial and industrial)	1. Describe that interstitial lung diseases is a group of diseases that share some common clinico-pathological features 2. Describe the common clinico-pathological features shared by interstitial &industrial lung diseases 3. Explain what is meant by honey comb lung 4. State the common disease entities included in interstitial lung diseases and industrial lung diseases. 5. Briefly outline the clinico- pathological features of these disease entities	1 hr	Lecture	Pathology
2015-SBM/MED3119/05 Neoplasia (lung, pleura and mediastinum)	1. Recall chronic inflammation, metaplasia, dysplasia, carcinogenesis & spread of tumours 2. Classify epithelial neoplasms of lung and pleura 3.describe the aetiopathogenesis and morphological appearances of tumours of lung and pleura 4. describe the modes of spread of tumours of lung 5. List the paraneoplastic syndromes associated with lung tumours. 6. describe the diagnostic tests available for tumours of lung	1hr	Lecture Demonstration	Pathology

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2015-SBM/MED3119/06 **Museum class**	1. Identify the morphological changes in diseases of the respiratory tract using mounted specimens 2. Outline the possible clinical manifestations that these changes can produce	4 hrs	Guided SGL	Pathology
	Describe the clinic-pathological correlations of lung diseases using clinical scenarios			
2015-SBM/MED3119/07 Radiological manifestations of lung diseases	1. Describe common radiological manifestations of lung diseases 2. Describe their pathological basis	1hr	SGD	
2015-SBM/MED3119/08 Clinical manifestations of lung diseases	1. Describe the clinico-pathological correlations of lung diseases using clinical scenarios.			Pathology
2015-SBM/MED3119/09 Atherosclerosis and Peripheral Vascular Disease	1. Pathology: recall , objectives given in FCP • different patterns of atherosclerosis • the clinical significance of atherosclerosis • the epidemiology and risk factors of atherosclerosis • the pathogenesis of atherosclerosis • the macroscopic and microscopic appearances of the atheromatous plaques and fatty streaks • Define Pheripheral vascular disease (PVD) • Identify those who are at risk of developing PVD 2. describe the clinico-pathological outcomes of PVD	1hr	Lecture	Pathology

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2015-SBM/MED3119/10 Hypertension and its complications	1. outline the aetiology of hypertension 2. Describe the pathophysiology of hypertension. 3. Describe the pathological changes in large and small arteries in benign and malignant hypertension. 4. Outline the end organ effects due to hypertensive vascular changers eg. Heart, kidney, brain. 5. describe the pathological basis of the clinical symptoms due to involvement of these organs 6. Explain the role of imaging in hypertension. 7. to provide the student with a understanding of organ physiology and its functions with regards to radioisotope uptake in health and disease by: 8. myocardium 9. renovascular system 10. correlate the radio isotope uptake with organ function in health and disease with respect to 11. a myocardium b renovascular system	1hr	Lecture	Pathology
2015-SBM/MED3119/11 Vasculitis, aneurysms and dissection	1 describe the pathogenesis of non-infectious vasculitis 2 describe the pathological changes in vasculitis and describe the clinical outcomes due to these changes. 3 outline the main pathological changes and clinical outcomes in the vasculitic diseases named here	1hr	Lecture	Pathology
2015-SBM/MED3119/12 Aneurysms	1 Define the lesion aneurysm 2 Describe the pathogenesis of aneurysms. 3Describe different morphological types of aneurysms. 4 Describe the possible clinical outcomes and complications of aneurysms and describe their pathological basis. 5 Describe pathogenesis, morphology, clinical outcome and complications of aortic dissection.	1hr	Lecture	Pathology

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2015-SBM/MED3119/13 Ischaemic Heart Disease	1 outline the epidemiology of IHD 2 describe the pathogenesis of IHD 3 describe the role of fixed coronary obstructions, acute plaque change, coronary thrombus and vasoconstriction in coronary heart disease 4 describe the myocardial response to coronary arterial obstruction 5 name different types of angina and describe the pathological basis of them 6 describe the pathogenesis and morphogical changes in different types of myocardial infarctions. 7 describe the evolution of morphologic changes in myocardial infarction 8 describe the consequences and complications of myocardial infarction 9 describe the basis and clinical significance of reperfusion injuries. 10 describe the pathological changes in chronic IHD and the clinical outcomes. 1 Define ischaemic heart disease 2 List the risk factors for ischaemic heart disease 3 List the types of ischaemic heart disease 4 describe the clinical manifestations of ischaemic heart disease 5 list the investigations in IHD 6 describe the electrophysiological changes in IHD 7 list the types of acute coronary syndrome 9 list the complications of acute coronary syndrome	2hrs	Lecture	Pathology

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2015-SBM/MED3119/14 Clinical aspects of IHD	1 Describes the pathogenesis and clinical outcomes of thromboangiitis and phlebothrombosis. 2.describe the pathogenesis of venous thrombosis 3. describe the pathogenesis and effects of lymphangitis and lymphoedema (recall, objectives given in FCP)			
2015-SBM/MED3119/15 Rheumatic fever and valvular heart diseases	1. Describe the aetiopathogenesis of rheumatic fever and its implications. 2. Describe the morphological changes acute and chronic rheumatic heart disease. 3. Describe the clinical outcomes and complications of acute and chronic rheumatic heart disease and describe the pathological basis of them. 4. Pathogenesis, macroscopic appearance, clinical manifestations and complications of other valvular heart diseases e.g., that has calcified (calcific Aortic stenosis) and in myxomatous degeneration (MVP) 5. Describe common congenital valvular diseases.	2hrs	Lecture	Pathology
2015-SBM/MED3119/16 Infective endocarditis	1. State the risk factors for infective endocarditis 2. describe the aetiopathogenesis of infective endocarditis 3. Describe the clinical manifestation of infective endocarditis and their pathological basis. 4. Describe the cardiac and systemic complications of infective endocarditis 5. List the investigations for infective endocarditis 6. List the non infective causes of cardiac vegetations	1 hour	Lecture	Pathology

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2015-SBM/MED3119/17 Pericardial and Myocardial diseases	1. Describe the causes, pathogenesis macroscopic and microscopic appearance of myocarditis 2. describe the pathological basis of clinical outcomes and complications of myocarditis 3. describe the different types of cardiomyopathies 4. Describe the aetiology and pathological changes in these cardiomyopathies and their clinical significance. 5. List the common tumours of heart and blood vessels. Pericardial diseases. 1 describe the pathogenesis of pericardial effusions and haemopericardium 2 describe the pathogenesis and pathological changes changes in serous pericarditis, fibrinous and serofibrinous pericarditis, purulent or suppurative pericarditis, haemorrhagic pericarditis and caseous pericarditis. 3 describe the pathological basis of clinical outcomes in these conditions. 4 describe the pathogenesis, macroscopic appearance and clinical manifestations in constrictive pericarditis.	1hr	lecture	Pathology
2015-SBM/MED3119/18 Heart failure	1. Recall – physiology of pumping action of heart 2. Describe the mechanisms of heart failure 3. Describe how cardiac hypertrophy enhance the risk of developing heart failure 4. Describe the compensatory mechanisms in heart failure 5. Describe the pathogenesis of clinical manifestations in decompensated heart failure. 6. Describe the morphology of heart, lungs and liver in decompensated heart failure. 7. Define corpulmonale. 8. List the causes and clinical manifestation of cor pulmonale.			

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2015-SBM/MED3119/19 Laboratory diagnosis of cardiac disease				
2015-SBM/MED3119/20 Thyroid (non neoplastic diseases)	1. Recall anatomy, histology and hormone production of the thyroid gland 2. Recall the regulation of thyroid hormone production 3. Describe the clinical manifestations of hypothyroidism and hyperthyroidism 4. List the common causes of hypo and hyper thyroidism 5. List the types of goiters and causes for each type 6. Describe the thyroid manifestations of iodine deficiency and their progression 7. Describe the aetiopathogenesis and clinical manifestations of Graves disease 8. List the types of thyroiditis and describe the aetiopathogenesis and clinical manifestations of Hashimoto thyroiditis. 9. Describe the common benign and malignant neoplasms of thyroid 10. List the investigations performed in thyroid diseases and their applications in common thyroid diseases	**4 hrs**		**Pahtology**
2015-SBM/MED3119/21 Thyroid (neoplastic diseases)				
2015-SBM/MED3119/22 Investigation of thyroid diseases				
	Recall		Lecture (Foundation)	Pathology

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	1. Recall the physiology of the motor unit and its neural control 2. outline how disorders at different levels in the control mechanisms affect muscle function	1hr	Lecture	Medicine
	1. Classify muscle diseases on an aetiological basis 2. Describe the pathology and basic clinical features common to all muscle diseases 3. Describe the clinical features of common muscle diseases	1hr 1 hr	Lecture Lecture	Medicine Pathology
	Covered in 3 above			Medicine
2015-SBM/MED3119/23 Investigation of common hormone diseases	a. Recall the basis of testing endocrine functions and clinical relevance b. List routine tests that are available to detect endocrine malfunction c. Recall - i. hypothalamic – pituitary function ii. thyroid gland function iii. adrenal gland function iv. gonadal (male/female) function **Correlate clinical features with laboratory investigations of the pituitary, thyroid, adrenal, gonadal dysfunctions.**	1 hr	Lecture	Pathology
2015-SBM/MED3119/24 Lymphadenopathy	1. Describe the causes Pathology, clinical associations and diagnosis of lymphadenopathy 2. Outline the common types of lymphomas	2 hr	Lecture	Pathology
2015-SBM/MED3119/25 Splenomegaly	**1.** To describe the causes, pathology and clinical features of splenomegaly	2 hr	Lecture	Pathology

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2015-SBM/MED3119/26 Aetiopathogenesis of Diabetes	1. Understand the beta cells and the secretion of insulin 2. Understand the glucose transporters in different tissues 3. Describe the actions of insulin 4. Know the definition of diabetes mellitus 5. Know the classification of diabetes 6. Describe the pathogenesis of Type 1 diabetes 7. Describe the pathogenesis of Type 2 diabetes 8. List the risk factors for insulin resistance 9. Describe the pathogenesis of gestational diabetes 10. List the secondary causes for diabetes mellitus a. Regulation of normal blood sugar - hypoglycemia - hyperglycemia a. Diagnosis in symptomatic patients b. Diagnosis in asymptomatic patients c. Use of FBS d. IGT/IFG	1 hr	Lecture	Pathology
2015-SBM/MED3119/27 Chronic diabetic complication		1 hr	Lecture	Pathology

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2015-SBM/MED3119/28 Acute diabetic complications	1. List the acute complications of diabetes 2. Describe their pathogenesis, clinical manifestations with pathological basis 3. List the investigations and outline their interpretations 4. List the long term complications of diabetes 5. Describe the possible mechanisms responsible for these 6. Describe the different pathological manifestations of long term diabetes complications 7. Describe their clinical manifestations 8. List the screening tests and other investigations performed to detect these complications	1 hr	Lecture	Pathology
2015-SBM/MED3119/29 Obesity and Metabolic syndrome.	1. Understand the diagnostic criteria for obesity and metabolic syndrome 2. List the co-morbidities of obesity 3. Understand the pathophysiology of obesity, insulin resistance and metabolic syndrome 4. Explain the benefits of weight loss 5. Outline the management strategies of obesity and metabolic syndrome	1 hr	Lecture	Pathology (Physiology)
2015-SBM/MED3119/30 Diagnosis and monitoring of diabetes mellitus	Describe the relevance of following analysis in measuring of metabolic control of Diabetes a) blood glucose b) glycosylated hemoglobin c) C- peptide	1 hr	Lecture	Pathology
	Describe the clinic-pathological correlations of endocrine diseases using clinical scenarios**.**			

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	1 Identify the morphological changes in diseases of endocrine organs, spleen and lymph nodes of the respiratory tract using mounted specimens **Outline the possible clinical manifestations that these changes can produce**		Guided SGL	Pathology
	Diabetes mellitus /Hypoglycaemia Hypo and hyperthyroidism adrenocortico insufficiency **obesity and growth abnormalities**			
2015-SBM/MED3119/31 Disorders of calcium, magnesium and phosphate metabolism		1 hr	Lecture	Pathology
	Identify the morphological changes in skeletal diseases using mounted specimens **Outline the possible clinical manifestations that these changes can produce**	2hrs	Guided SGL	Pathology
	Describe the clinic-pathological correlations of skeletal diseases using clinical scenarios.	1hr	SGD	
2015-3/PATH- SBM-02/2 Metabolic and remodeling bone disorders	1. Recall normal bone metabolism 2. Describe aetiology,pathogenesis and complications of Osteoporosis, osteomalacia/rickets, Paget's diseases and hyperparathyroidism 3. Explain the basis of pathological fractures and clinical manifestation of complications mentioned in objective 2.	1hr 2hr	Lecture	Pathology

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2012-3/PATH-SBM-02/33 Measurement of Endocrine Dysfunctions		4hrs		Pathology
2015-3/PATH- SBM-2/34 Infections of bone and joints	1. Recall general pathology of acute and chronic inflammation 2. Describe aetiopathogenesis, morphology and clinical manifestations of acute and chronic osteomyelitis 3. Describe the complications of acute and chronic osteomyelitis.	1 hr	Lecture	Pathology
2015-3/PATH- SBM-2/35 Neoplasms (bone and soft tissue)	1.Recall general pathology of carcinogenesis and spread of tumours 2. Enumerate the primary cartilaginous and osseous tumours 3. Describe the pathological features and correlate the radiological signs of common bone tumours 4. Describe the pathological features of metastatic bone tumours	1 hr	Lecture	Pathology
2015-SBM/MED3119/36 Diseases of the joints	Describe the aetiopathogenesis of common joint diseases	2 hr	Lecture	Pathology
2015-SBM/MED3119/37 Fracture healing	1. Recall general pathology on fracture healing and repair 2. Apply the principles of wound healing to bone and cartilage 3. Describe the immediate and late complications of fracture healing	1 hr	Lecture	Pathology
	Describe the aetiology, pathology and clinical manifestations of congenital bone diseases			

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2015-3/PATH- SBM-2/38 Imaging of bone diseases	1. Recognize basic radiological signs of bone diseases with a pathological basis (periosteal reaction, bone destruction/ lytic lesions (osteoclastic activity) and sclerosis (osteoblastic activity) 2. Recognize a simple fracture and the types of fractures on plain radiographs in adults & children 3. Differentiate simple from pathological fracture 4. Recognize major manifestations of following conditions Hyperparathyroidism, Rickets, osteomalacia, osteoporosis, Acute and chronic osteomyelitis 5. differentiate benign from malignant bone tumour 6. recognise various manifestations of metastatic bone disease 7. Place of MRI in bone disease 1. understand organ (bone) physiology and its function with regard to radio isotope intake 2. understand when and how to use skeletal scintigraphy	1 hr	Lecture	Radiology
Museum class		10 hrs		Pathology
SGD Respiration CVS Endocrine		3 hrs		Pathology

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