MD RESPIRATORY MEDICINE

Structure & Functions of Respiratory System, Cardiovascular system and mediastinum.

1- Anatomy
2- Development & aging of respiratory system
3- Physiology
4- Pathophysiology
5- Microbiology
6- Genetics
7- Pharmacology
8- Pathology
9- Immunology & defence mechanisms
10- Moleculay biology
11- Biochemistry

Airways

1-Asthma
2-Acute Bronchitis
3-Chronic bronchitis/ COPD
4-Bronchiolitis
5-Bronchiectasis
6-Airway Stenosis, megaly & malacia
7-Tracheooesophageal Fistula
8-Upper airway disease
9-Vocal cord Dysfunction
10-FB aspiration
11-GERD

Thoracic Tumours

1-Lung cancer
2-Metastatic Pulmonary tumours
3-Mesothelioma
4-Metastatic & Other pleural tumours
5-Benign intrathoracic tumours
6-Mediastinal tumours
7-Chest wall tumours
8-Sarcoma
9-Lymphoma and related diseases.

Non TB Respiratory Infections

1- Upper Respiratory Infections
2- Lower respiratory infections
3- Community acquired pneumonia
4- Nosocomial pneumonia
5- Pneumonia in the immunocompromised host

6- Other pneumonias
7- Parapneumonic effusion & Empyema
8- Lung abscess
9- Fungal infections
10- Parasitic infections
11- Epidemic Viral infections

Tuberculosis

1-Pulmonary TB
2- Extrapulmonary TB
3- TB in the immunocompromised host
4- Latent TB infections
5- Non tuberculous mycobacterial diseases
6- Drug resistant Tuberculosis
7- Tuberculosis control programme

Pulmonary Vascular diseases

1- Pulmonary Embolism
2- Pulmonary edema
3- Primary Pulmonary Hypertension
4- Secondary Pulmonary Hypertension, Cor Pulmonale
5- Vasculitis and Diffuse pulmonary hemorrhage
6- Abnormal A-V communication
7- Hepatopulmonary Syndrome

Occupational and Environmental Diseases

1- Occupational Asthma
2- Reactive airway dysfunction syndrome
3- Pneumoconiosis and Asbestos related Disease
4- Hypersensitivity pneumonitis
5- Dust and Toxic gas inhalation disease
6- Indoor pollution related diseases
7- Outdoor pollution related disease
8- Smoking related disease
9- High altitude Disease
10- Diving related disease, Aviation and sports related pulmonary disorders.
11. Disability evaluation and compensation.

Diffuse Parenchymal (interstitial) Lung Diseases

1- Sarcoidosis
2- Idiopathic Interstitial pneumonias including Idiopathic Pulmonary Fibrosis (IPF) NSIP,COP, AIP, RB-ILD, DIP, LIP

3- Cryptogenic organizing Pneumonia of unknown etiology/ Bronchiolitis obliterans organizing Pneumonia (BOOP)
4- Interstitial lung diseases specific to Infancy

Latrogenic diseases

1- Drug induced lung diseases
2- Complications of invasive procedures
3- Radiation induced Disease

Acute Injury

1- Inhalation Lung Injury
2- Traumatic thoracic injury

Respiratory Failure

1- Acute Lung Injury and Acute Respiratory Distress Syndrome
2- Obstructive Lung disease
3- Neuromuscular Disease
4- Chest Wall Diseases
5- Other restrictive lung Diseases

Pleural Diseases

1- Pleurisy
2- Pleural Effusion
3- Chylothorax
4- Haemothorax
5- Fibrothorax
6- Pneumothorax

Diseases of the chest wall and respiratory muscles including the diaphragm

1- Chest wall deformities
2- Neuromuscular disorders
3- Phrenic Nerve Palsy
4- Diaphragmatic hernia

Mediastinal Diseases excluding tumours

1- Mediastinitis
2- Medistinal Fibrosis
3- Pneumomedistinum

Pleuropulmonary manifestations of systemic/ Extrapulmonary disorders

1- Collagen vascular disease
2- Cardiac disease

3 - Abdominal disease
4- Haematological disease
5- Obesity
6- Hyperventilation syndrome

Genetic and Developmental Disorders

1- Cystic Fibrosis
2- Primary Ciliary Dyskinesia
3- Alpha-1 antitrypsin deficiency
4- Agenesis, Aplasia and Hypoplasia
5- Sequestration

Respiratory Diseases and Pregnancy

1- Asthma
2- Cystic fibrosis
3- Tuberculosis
4- Sarcoidosis
5- Restrictive Lung diseases
6- Pregnancy induced respiratory diseases

Allergic Diseases (IgE mediated)

1- Upper airway diseases
2- Asthma
3- Allergic Bronchopulmonary aspergillosis
4- Anaphylaxis

Eosinophilic Diseases

1- Non-asthmatic eosinophilic bronchitis
2- Acute and chronic eosinophilic pneumonia
3- Hypereosinophilic syndrome
4- Churg-strauss syndrome

Sleep related disorders

1- Obstructive sleep apnoea
2- Central sleep apnoea
3- Upper airway resistance syndrome
4- Obesity hypoventilation syndrome

Immunodeficiency disorders

1- Congenital immunodeficiency syndrome
2- Acquired immunodeficiency syndrome
3- HIV related diseases
4- Graft versus host diseases
5- Post-transplantation immunodeficiency

Orphan Lung diseases

1- Langerhans cell histiocytosis
2- Lymphangioleiomyomatosis
3- Pulmonary alveolar proteinosis
4- Amyloidosis

Symptoms and Signs

1- Dyspnoea
2- Wheeze
3- Stridor
4- Hoarseness
5- Cough
6- Sputum production
7- Chest Pain
8- Haemptysis
9- Snoring
10- General symptoms of disease including fever, weight loss, oedema, Nocturia and Day time somnolence
11- Abnormal findings on inspection including cyanosis, abnormal breathing patterns, finger clubbing, chest wall deformities, superior vena cava syndrome and Horners syndrome
12- Abnormal findings on palpation and percussion
13- Abnormal findings on auscultation

Pulmonary Function Testing

1- Static and Dynamic Lung Volumes- Interpretation and Performance
2- Body Plethysmography – Interpretation
3- Gas transfer- Interpretation
4- Blood gas assessment and Oximetry-Interpretation and Performance
5- Bronchial provocation testing- Interpretation and performance
6- Cardiopulmonary exercise testing- Interpretation and performance
7- Assessment of respiratory mechanics- Interpretation
8- Compliance measurements - Interpretation
9- Respiratory muscle assessment – Interpretation
10- Ventilation perfusion measurement – Interpretation
11- Shunt measurement – Interpretation
12- Sleep studies- Interpretation and performance
13- Measurement of regulation of ventilation- Interpretation

Other procedures

1- Blood test and serology relevant to Respiratory medicine
2- Analysis of exhaled breath components including NO,CO and breath condensate
3- Sputum induction
4- Sputum analysis
5- Tuberculin skin testing
6- Allergy skin testing
7- Thoracic ultrasound imaging

8- Thoracentesis
9- Closed needle pleural biopsy
10- Medical thoracoscopy
11- Flexible bronchoscopy
12- Transbronchial lung biopsy
13- Transbronchial needle aspiration
14- Endobronchial ultrasound
15- Bronchalveolar lavage
16- Bronchography
17- Rigid bronchoscopy
18- Interventional bronchoscopic technique including fluorescent bronchoscopy, brachytherapy, endobronchial radiotherapy, afterloading laser and electrocoagulation cryotherapy, Photodynamic therapy and airway stents.
19- Transthoracic needle aspiration & biopsy
20- Fine needle lymphnode aspiration for cytology
21- Right heart catheterization
22- Chest X-ray
23- Flouroscopy

Procedures performed collaboratively

1- Thoracic imaging (X-ray, CT, MRI)
2- Nuclear medicine techniques (Pulmonary and Bone scan PET)
3- Electrocardiogram
4- Echocardiography
5- Ultrasound
6- Transoesophageal ultrasound
7- Oesophageal pH monitoring
8- Cytology/Histology
9- Microbiology testing

Treatment modalities and prevention measures

1- Systemic and inhaled drug therapy
2- Chemotherapy
3- Other systemic antitumour therapy
4- Immunotherapy including de-/ hyposensitization
5- Oxygen therapy
6- Ventilatory support (Invasive/ Noninvasive/CPAP)
7- Cardiopulmonary resuscitation
8- Assessment for anaesthesia/Surgery
9- Endobronchial therapies
10- Intercostal tube drainage
11- Pleurodesis
12- Home care
13- Palliative care
14- Pulmonary rehabilitation
15- Nutritional interventions
16- Surfactant therapy
17- Gene therapy

18- Principles of stem cell therapy
19- Smoking cessation
20- Vaccination and infection control
21- Other preventive measures

Core generic abilities

1- Communication including patient education and public awareness
2- Literature appraisal
3- Research
4- Teaching
5- Audit/ quality assurance of clinical practice
6- Multidisciplinary teamwork
7- Administration and management
8- Ethics

Competencies in the fields shared with other specialties

1- Intensive care
2- High dependency units

Knowledge of associated fields relevant to adult Respiratory medicine

1- Thoracic surgery
2- Radiotherapy
3- Paediatric respiratory medicine
4- Chest physiotherapy
5- Other relevant medical specialties

Further areas relevant to respiratory medicine

1- Epidemiology
2- Statistics
3- Evidence based medicine
4- Quality of life measures
5- Psychological factors in the development of respiratory diseases
6- Psychological consequences of chronic respiratory diseases
7- Public health issues
8- Organization of Health care
9- Economics of health care
10- Compensation and legal issues