UNIVERSITY OF CALGARY
CUMMING SCHOOL OF MEDICINE

Undergraduate Medical Education (UME)
Medical Doctor Program (MD)
Course Outline

Land Acknowledgement
Territorial Land Acknowledgement https://www.ucalgary.ca/indigenous/cultural-teachings/territorial-land-acknowledgement

Course Number:	MDCN 504.01
Course Title:	Internal Medicine Clerkship
Dates:	Jan 15, 2024 – April 27, 2025 (Class of 2025)
Schedules and classroom locations:	The timetable is located here https://cumming.ucalgary.ca/mdprogram/current-students/pre-clerkship-year-1-2/timetable All information, including day to day detailed schedule with dates, times and locations of learning events, is located on the curriculum management system currently named OSLER. For clerkship: rotation schedule & location information will be emailed

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Course Description
University of Calgary calendar (https://calendar.ucalgary.ca/) https://calendar.ucalgary.ca/courses?cq=&career=Medicine%20Programs&page=1

Supplementary Fees/Costs
Medical School Costs https://cumming.ucalgary.ca/mdprogram/current-students/financial-aid/medical-school-costs **Financial Planning and Support Links** https://cumming.ucalgary.ca/mdprogram/future-students/financial-aid/financial-planning-and-support-links

Learning Resources
All learning resources will be found on Fresh Sheet and on the curriculum management system currently named OSLER.
Learning Objectives
Overall Objective

By the end of the internal medicine clerkship rotation, clinical clerks will be able to demonstrate the knowledge, skills, and attitudes required to confidently proceed in training as a junior resident on any medical service.

Performance will be assessed by clerks' active participation in the formal teaching activities and the formative midterm MCQ examination, as well as successful completion of the summative MCQ examination, completed logbook and the in-training performance evaluation (ITER) reports.

Enabling Knowledge Objectives
Essential Diagnoses/Syndromes

Diseases and syndromes within each of the relevant Internal Medicine Clinical Presentations have been divided into 'essential' and 'less important' entities.
At the end of the eight-week clerkship, it is expected that the clerk will be able to diagnose these 'essential' diseases and syndromes, and to a lesser extent treat them, as demonstrated by successful completion of the summative written examination and the in-training performance evaluation reports.

Conditions deemed 'essential' (as summarized in Table 1) have been categorized in this manner for a number of possible reasons, including:
- Common
- Acute presentations needing acute management
- Potential grave complications of missing diagnosis
- Important part of differential diagnosis for a given clinical presentation

For these reasons, 'essential' causes will make up most of the examination diagnoses. However, the final diagnosis on an examination question may be a 'secondary' cause, but the 'essential' cause(s) will feature highly in the differential diagnosis.

'Secondary' causes may be common diseases (ex: vasovagal syncope, chest wall pain) that may in fact be the final diagnosis on an examination question, but are listed as 'secondary' for reasons such as:
- Benign disease
- No specific treatment
- Diagnosis of exclusion (excluding the 'essential' causes)
- No specific diagnostic test for condition

Where a syndrome is listed (ex: hemolysis), the diagnosis of the syndrome is considered essential, and unless stated otherwise, the specific causes (ex: sickle cell) are less important.
Drug classes and their side-effects have been listed separately in section D, Table 2.
The numbers assigned to each clinical presentation correspond to their numbers in the main University of Calgary Medical School Clinical Presentation list.

GENERAL

03. **FEVER AND CHILLS**

- **ESSENTIAL**
- INFECTIOUS CAUSES: MENINGITIS, ENCEPHALITIS, PNEUMONIA (ATYPICAL AND TYPICAL COMMUNITY-ACQUIRED +/- EMPYEMA), MYCOBACTERIUM TUBERCULOSIS, HIV, ENDOCARDITIS, UTI/PYELO, SEPTIC JOINT
- NEOPLASTIC CAUSES: LYMPHOMAS, LEUKEMIAS, CARCINOMAS (LUNG)
- COLLAGEN VASCULAR DISEASES: SLE, RA
- OTHER: SARCOIDOSIS, INFLAMMATORY BOWEL
- **SECONDARY**

- INFECTIOUS CAUSES: ASPIRATION AND NOSOCOMIAL PNEUMONIAS, LUNG ABSCESS, BONE, GASTROINTESTINAL, SKIN INFECTIONS
- RHEUMATIC FEVER, SEXUALLY TRANSMITTED DISEASES
- OTHER CARCINOMAS

RETICULOENDOTHELIAL

06. **ANEMIA/PALLOR/FATIGUE**
- **ESSENTIAL**
- MICROCYTIC CAUSES: IRON DEFICIENCY, ANEMIA OF CHRONIC DISEASE
- NORMOCYTIC CAUSES: ACUTE BLOOD LOSS (SEE 96,97), BONE MARROW FAILURE, MULTIPLE MYELOMA, HEMOLYSIS (INCLUDING TRANSFUSION REACTIONS), CHRONIC RENAL FAILURE (SEE 44)
- MACROCYTIC CAUSES: B12 DEFICIENCY
- **SECONDARY**
- THALASSEMIAS
- FOLATE DEFICIENCIES

07. **BLEEDING TENDENCY/BRUISING**
- **ESSENTIAL**
- PLATELET CAUSES: THROMBOCYTOPENIA
- DECREASED PRODUCTION (SEE ALSO 'ANEMIA', BONE MARROW CAUSES)
- SEQUESTRATION (SEE ALSO 'SPLENOMEGALY')
- DESTRUCTION: DIC, ITP, SLE, TTP/HUS
- COAGULATION CAUSES: LIVER DISEASE-RELATED, DIC
- VASCULAR CAUSES: VASCULITIS
- **SECONDARY**
- PLATELET CAUSES: VON WILLEBRAND'S
- COAGULATIN CAUSES: HEMOPHILIA, VITAMIN K DEFICIENCY

08. **ELEVATED HEMATOCRIT/POLYCYTHEMIA**
- **SECONDARY**
- POLYCYTHEMIA RUBRA VERA (PRV)
- SECONDARY CAUSES: HYPOXIA, ERYTHROPOEITIN-SECRETING TUMOUR

09. **PAINFUL LIMB**
- 09A PAINFUL SWOLLEN LIMB
- **ESSENTIAL**
- EDEMA (SEE 35 BELOW), DEEP VEIN THROMBOSIS (SEE 09B BELOW)
- **SECONDARY**
- INFECTIONS (BONE, SOFT TISSUE, JOINT)
- 09B VENOUS THROMBOSIS/HYPERCOAGULABLE STATES
- **ESSENTIAL**
- DVT TRIAD: TRAUMA, STASIS, HYPERCOAGULAB ILITY
- CAUSES OF HYPERCOAGULABILITY: MALIGNANCY, NEPHROTIC SYNDROME, INFLAMMATORY BOWEL DISEASE
- **SECONDARY**

- OTHER CAUSES OF HYPERCOAGULABILITY: PROTEIN C,S, ANTI-THROMBIN III DEFICIENCY, APC RESISTANCE
- 09C INTERMITTENT CLAUDICATION
- **SECONDARY**
- PERIPHERAL VASCULAR DISEASE

10. **ABNORMALITIES OF WHITE CELLS**
- **ESSENTIAL**
- NEOPLASTIC CAUSES OF LYMPHOCYTOSIS: ALL, AML
- **SECONDARY**
- NEOPLASTIC: CLL, CML
- CAUSES OF REACTIVE LYMPHOCYTOCIS (VIRAL, BACTERIAL INFECTIONS)
- ALL CAUSES OF: NEUTROPENIA, NEUTOPHILIA

11. **LYMPHADENOPATHY: GENERALIZED**
- **ESSENTIAL**
- DIFFUSE LYMPHADENOPATHY, NEOPLASTIC CAUSES: LYMPHOMA (HODGKIN'S, NHL)
- DIFFUSE LYMPHADENOPATHY, REACTIVE CAUSES: INFECTIONS (HIV), INFLAMMATORY (SLE, RA, SARCOIDOISIS)
- **SECONDARY**
- CAUSES OF LOCALIZED LYMPHADENOPATHY

12. **SPLENOMEGALY**
- **ESSENTIAL**
- CAUSES: LIVER DISEASES, INFECTIONS (HIV), NEOPLASTIC (LYMPHOMAS/LEUKEMIAS), HEMOLYSIS, INFLAMMATORY (SLE, RA, SARCOIDOSIS)

13. **FEVER IN THE IMMUNOCOMPROMISED HOST**
- **ESSENTIAL**
- SAME AS FOR 'FEVER' (003)
- **SECONDARY**
- FEBRILE NEUTROPENIA

MUSCULOSKELETAL AND SKIN

18. **JOINT PAIN, MONO-ARTICULAR (ACUTE, CHRONIC)**
- **ESSENTIAL**
- OSTEOARTHRITIS
- SEPTIC JOINT
- CRYSTAL-INDUCED: GOUT/PSEUDOGOUT
- SYSTEMIC DISEASE, MONOARTICULAR PRESENTATION: SLE, RA
- INFLAMMATORY AXIAL CAUSE: REITER'S SYNDROME
- **SECONDARY**
- TRAUMA
- INFLAMMATORY AXIAL CAUSES: ANKYLOSING SPONDYLITIS, PSORIATIC ARTHRITIS, INFLAMMATORY BOWEL ASSOCIATED

19. **JOINT PAIN, POLYARTICULAR (ACUTE, CHRONIC)**

- **ESSENTIAL**
- INFLAMMATORY, SYMMETRIC CAUSES: RHEUMATOID ARTHRITIS, SLE
- INFLAMMATORY, ASYMETRIC CAUSE: REITER'S SYNDROME
- NON-INFLAMMATORY CAUSE: OSTEOARTHRITIS
- **SECONDARY**
- OTHER CAUSES: VIRAL ARTHRITIS, PSORIATIC ARTHRITIS, RHEUMATIC FEVER

20. **REGIONAL PAIN, NON-ARTICULAR (HAND, WRIST, ELBOW, SHOULDER, SPINE, HIPS, KNEE, FOOT)**

- **ESSENTIAL**
- NERVE ROOT DISTRIBUTIONS (SENSORY, MOTOR, REFLEXES)
- POLYMYALGIA RHEUMATICA/GIANT-CELL ARTERITIS
- **SECONDARY**
- FIBROMYALGIA

CARDIOVASCULAR SYSTEM

23. **CHEST DISCOMFORT**

- **ESSENTIAL**
- CARDIOVASCULAR CAUSES: ANGINA/MYOCARDIAL INFARCTION, AORTIC DISSECTION, PERICARDITIS (AND ITS CAUSES)
- RESPIRATORY CAUSES: PLEURAL DISEASE (SEE 29C), PNEUMONIA (SEE 03), PNEUMOTHORAX, PULMONARY EMBOLUS
- **SECONDARY**
- OTHER CAUSES: CHEST WALL, SKIN DISEASES, GASTROINTESTINAL DISEASES, PSYCHOGENIC

24. **LOSS OF CONSCIOUSNESS/SYNCOPE/PRESYNCOPE**

- **ESSENTIAL**
- SEIZURES (SEE 70)
- CEREBROVASCULAR CAUSES: STROKE (TIA)
- CARDIOVASCULAR CAUSES:
- MECHANICAL: AORTIC STENOSIS
- **ELECTRICAL:**
- BRADYARRYTHMIAS: HEART BLOCKS
- TACHYARRYTHMIAS: ATRIAL FIBRILLATION, VENTRICULAR TACHYCARDIA
- METABOLIC CAUSES: HYPOXIA (SEE 29), HYPOGLYCEMIA
- **SECONDARY**
- REFLEX/UNDERFILL CAUSES: VASOVAGAL, ORTHOSTATIC
- PSYCHOGENIC

25. **PALPITATIONS (ABNORMAL ECG)**

- **ESSENTIAL**
- CAUSES: ATRIAL FIBRILLATION, VENTRICULAR TACHYCARDIA
- **SECONDARY**
- CAUSES: SUPRAVENTRICULAR TACHYCARDIA, WOLFF-PARKINSON-WHITE

26. **SHOCK (HYPOTENSION)**

- **ESSENTIAL**
- CARDIOGENIC CAUSES: MYOCARDIAL INFARCTION, ENDOCARDITIS, AORTIC DISSECTION
- HYPOVOLEMIC CAUSES: ACUTE BLOOD LOSS (SEE 96,97), PANCREATITIS
- DISTRIBUTIVE: SEPSIS (SEE 03)
- OBSTRUCTIVE: TENSION PNEUMOTHORAX, PULMONARY EMBOLUS, PERICARDIAL TAMPONADE

27. CARDIAC ARREST/CARDIOVASCULAR COLLAPSE
- **ESSENTIAL**
- CAUSES LISTED AS 'ESSENTIAL' IN OTHER CLINICAL PRESENTATIONS

28. MURMUR
- 28A SYSTOLIC MURMUR
- **ESSENTIAL**
- AORTIC STENOSIS, MITRAL REGURGITATION
- **SECONDARY**
- TRICUSPID REGURGITATION, PULMONARY STENOSIS, VSD
- 28B DIASTOLIC MURMUR
- **ESSENTIAL**
- MITRAL STENOSIS, AORTIC REGURGITATION
- **SECONDARY**
- TRICUSPID STENOSIS, PULMONARY REGURGITATION

RESPIRATORY SYSTEM

29. COUGH AND DYSPNEA
- ESSENTIAL
- CARDIAC CAUSES: UNSTABLE ANGINA, CONGESTIVE HEART FAILURE (PULMONARY EDEMA), PERICARDIAL TAMPONADE
- RESPIRATORY CAUSES: ASTHMA, COPD, PULMONARY EMBOLUS, PNEUMONIA (SEE 03), PNEUMOTHORAX, PLEURAL DISEASE (SEE 29C), LUNG CANCER, INTERSTITIAL LUNG DISEASES (ESP. SARCOIDOSIS, RA)
- OTHER: ANEMIA (SEE 06), HYPERTHYROIDISM (SEE 48A), METABOLIC ACIDOSIS (SEE 31A)
- SECONDARY
- PULMONARY HYPERTENSION, CHEST WALL/MUSCULAR, UPPER AIRWAY, CNS, FOREIGN BODY, PSYCHOGENIC

- 29A COUGH AND/OR DYSPNEA WITH NORMAL CHEST X-RAY
- ESSENTIAL
- CARDIAC CAUSES: TAMPONADE (NORMAL LUNGS ON X-RAY), UNSTABLE ANGINA
- RESPIRATORY CAUSES: PULMONARY EMBOLUS, ASTHMA, COPD,
- OTHER: ANEMIA (SEE 06), HYPERTHYROIDISM (SEE 48A), METABOLIC ACIDOSIS (SEE 31A)
- SECONDARY
- PULMONARY HYPERTENSION, CHEST WALL/MUSCULAR, UPPER AIRWAY, CNS, FOREIGN BODY, PSYCHOGENIC

- 29B COUGH AND/OR DYSPNEA WITH DIFFUSE CHEST X-RAY ABNORMALITY
- ESSENTIAL
- CAUSES: PULMONARY EDEMA, ATYPICAL PNEUMONIA, TUBERCULOSIS, INTERSTITAL LUNG DISEASES (ESP. SARCOIDOSIS, RA)
- SECONDARY

- OTHER CAUSES OF INTERSTITIAL LUNG DISEASES: PNEUMOCONIOSIS, IDIOPATHIC PULMONARY FIBROSIS, SCLERODERMA, WEGENER'S, GOODPASTURE'S, LYMPHANGITIC CARCINOMATOSIS, RADIATION INJURY, METHOTREXATE LUNG

- 29C COUGH AND/OR DYSPNEA WITH PLEURAL ABNORMALITY
- ESSENTIAL
- PNEUMOTHORAX
- PLEURAL EFFUSION
- TRANSUDATIVE: CHF, CIRROSIS, NEPHROTIC SYNDROME
- EXUDATIVE: PULMONARY EMBOLUS, MALIGNANCY (LUNG), PNEUMONIA/EMPYEMA (SEE 03), RA, SLE, PANCREATITIS
- SECONDARY
- MESOTHELIOMA
- OTHER METASTATIC MALIGNANCIES (BREAST,OVARIAN)
- CHYLOTHORAX

- 29D COUGH AND/OR DYSPNEA WITH LOCAL CHEST X-RAY ABNORMALITY
- ESSENTIAL
- PRIMARY LUNG CANCER, TUBERCULOSIS, RA
- SECONDARY
- OTHER INFECTIONS (HISTOPLASMOMA), PULMONARY INFARCT, WEGENER'S,VASCULAR MALFORMATIONS
- PLEURAL/MEDIASTINAL MASSES
- 29E COUGH, DYSPNEA AND FEVER
- ESSENTIAL
- PNEUMONIA (SEE 03), EXACERBATION OF COPD, PULMONARY EMBOLUS
- SECONDARY
- LUNG ABSCESS

30. HYPOXIA, HYPOXEMIA, CYANOSIS

- **ESSENTIAL**
- ALL CAUSES PREVIOUSLY LISTED AS ESSENTIAL UNDER COUGH/DYSPNEA (SEE 29)
- **SECONDARY**
- ALL CAUSES PREVIOUSLY LISTED AS ESSENTIAL UNDER COUGH/DYSPNEA (SEE 29)

31. ABNORMAL SERUM HYDROGEN ION CONCENTRATION

- **ESSENTIAL**
- 31 A: METABOLIC ACIDOSIS
- HIGH ANION GAP CAUSES
- ENDOGENOUS: DIABETIC KETOACIDOSIS, RENAL FAILURE (SEE 34)
- EXOGENOUS: SALICYLATE OVERDOSE
- **SECONDARY**
- 31A METABOLIC ACIDOSIS
- HIGH ANION GAP CAUSES:
- ENDOGENOUS: LACTIC ACIDOSIS, STARVATION KETOACIDOSIS
- EXOGENOUS: METHANOL, ETHYLENE GLYCOL OVERDOSE
- NORMAL ANION GAP CAUSES: DIARRHEA, RTA

- 31B METABOLIC ALKALOSIS
- CHLORIDE RESPONSIVE CAUSES: VOMITING, DIURETICS
- CHLORIDE UNRESPONSIVE CAUSES: CONN'S, CUSHING'S,BARTTER'S
- 31C/D RESPIRATORY ACIDOSIS/ALKALOSIS

32. HEMOPTYSIS

- **ESSENTIAL**
- CAUSES PREVIOUSLY CONSIDERED ESSENTIAL CAUSES OF COUGH AND DYSPNEA (TUMOUR, INFECTION, COPD, SLE, PULMONARY EDEMA, PULMONARY EMBOLUS)
- **SECONDARY**
- CAUSES PREVIOUSLY CONSIDERED LESS IMPORTANT CAUSES OF COUGH/DYSPNEA
- (BENING TUMOURS, VASCULAR MALFORMATIONS, WEGENER'S, GOODPASTURE'S)

RENAL - ELECTROLYTES SYSTEM

34. RENAL FAILURE, ACUTE

- **ESSENTIAL**
- PRE-RENAL CAUSES: CAUSES OF SHOCK (SEE 26)
- RENAL CAUSES:
- GLOMERULAR: SLE, TTP/HUS
- ACUTE TUBULAR NECROSIS (ISCHEMIC AND TOXIC)
- INTERSTITIAL:
- ACUTE INTERSTITIAL NEPHRITIS: BROAD CATEGORIES ONLY (DRUGS, INFECTION)
- RHABDOMYOLYSIS
- CAST NEPHROPATHY: GOUT (URIC ACID), MULTIPLE MYELOMA
- **SECONDARY**
- POST RENAL CAUSES
- THE SPECIFIC CAUSES OF ACUTE INTERSTITIAL NEPHRITIS
- OTHER CAUSES OF ACUTE GLOMERULONEPHRITIS: HENOCH-SCHONLEIN PURPURA, SCLERODERMA, WEGENER'S, GOODPASTURE'S, POST STREPTOCOCCAL)

36. GENERALIZED EDEMA

- **ESSENTIAL**
- RENAL FAILURE [34], CIRRHOSIS, NEPHROTIC SYNDROME, CONGESTIVE HEART FAILURE, HYPOTHYROID [48B]
- **SECONDARY**
- HYPOALBUMINEMIA (AND ITS SPECIFIC CAUSES)
- ANGIOEDEMA, DRUGS, VENOUS/LYMPHATIC DRAINAGE, INCREASED CAPILLARY PERMEABILITY (ANT ITS SPECIFIC CAUSES)

37. ABNORMAL SERUM SODIUM CONCENTRATION

- 37A HYPONATREMIA
- **ESSENTIAL**
- HYPOVOLEMIC (DIURETICS)
- EUVOLEMIC: SIADH (AND ITS BROAD CATEGORIES OF CAUSES)
- EDEMA STATES (SEE 36)
- **SECONDARY**
- ARTIFACTUAL, PRIMARY POLYDIPSIA

- 37B HYPERNATREMIA
- SECONDARY
- DIABETES INSIPIDUS, HYPERALDOSTERONISM

38. POLYURIA

- **ESSENTIAL**
- DIABETES MELLITUS (SEE 53)
- **SECONDARY**
- DIABETES INSIPIDUS, PRIMARY POLYDYPSIA

39. HYPERTENSION

- **ESSENTIAL**
- CAUSES:
- PRIMARY HYPERTENSION (INCLUDING HYPERTENSIVE CRISIS)
- SECONDARY CAUSES: RENAL PARENCYMAL DISEASE (SEE 34, 44), ALCOHOL (SEE 76)
- **SECONDARY**
- RENAL: TRANSPLANT, RENAL ARTERY STENOSIS
- CONN'S SYNDROME, PHEOCHROMOCYTOMA, THYROID DISEASE
- COARCTATION OF THE AORTA

40. ABNORMAL SERUM POTASSIUM CONCENTRATION/WEAKNESS/FATIGUE

- 40A HYPOKALEMIA
- **ESSENTIAL**
- BROAD CATEGORIES OF CAUSES: INTAKE, REDISTRIBUTION, LOSS (RENAL AND GI)
- **SECONDARY**
- THE SPECIFIC CAUSES (UNLESS CONSIDERED ESSENTIAL ELSEWHERE)
- 40B HYPERKALEMIA (FATIGUE, HYPERPIGMENTATION)
- **ESSENTIAL**
- LEUKEMIAS AS CAUSE OF PSEUDOHYPERKALEMIA
- REDISTRIBUTION CAUSES: DKA/INSULIN DEFICIENCY, HEMOLYSIS, RHABDOMYOLYSIS, NON-ANION GAP ACIDOSIS (SEE 31A)
- DECREASE EXCRETION CAUSES: RENAL FAILURE (SEE 34,44), ADDISON'S DISEASE
- **SECONDARY**
- INTAKE INCREASE
- REDISTRIBUTION CAUSES: TRAUMA/CRUSH, TUMOUR LYSIS
- DECREASED EXCRETION CAUSES: HYPORENINEMIC-HYPOALDOSTERONISM

41. DYSURIA

- **ESSENTIAL**
- URINARY TRACT INFECTION (CYSTITIS, PYELONEPHRITIS)
- **SECONDARY**
- PROSTATITIS, URETHRITIS (STD), IRRITABLE BLADDER

42. HEMATURIA

- **ESSENTIAL**
- DIFFERENTIATING EXTRAGLOMERULAR FROM GLOMERULAR HEMATURIA
- 42A HEMATURIA, EXTRARENAL

- **ESSENTIAL**
- CYSTITIS
- **SECONDARY**
- NEPHROLITHIASIS, TRAUMA, BLADDER CANCER, PROSTATITIS, URETHRITIS
- 42B HEMATURIA, INTRARENAL, EXTRAGLOMERULAR
- **ESSENTIAL**
- PYELONEPHRITIS
- VASCULAR
- HYPERTENSIVE HEPHROSCLEROSIS
- TUBULOINTERSTITIAL
- SLE, SARCOIDOSIS, MULTIPLE MYELOMA, URATE NEPHROPATHY
- **SECONDARY**
- RENAL TUMOURS/CYSTS
- TUBULOINTERSTITIAL
- SJOGREN'S, SCLERODERMA, OTHER VASCULAR (DM/PAPILLARY NECROSIS, SICKLE CELL)
- 42B HEMATURIA, GLOMERULAR
- **ESSENTIAL**
- SYSTEMIC (OTHER ORGAN INVOLVEMENT) CAUSES: SLE, HUS/TTP, MALIGNANT HYPERTENSION
- POSTINFECTION: ENDOCARDITIS
- **SECONDARY**
- NONSYSTEMIC CAUSES (ISOLATED): IGA NEPHROPATHY
- SYSTEMIC CAUSES: WEGENER'S, GOODPASTURE'S, HENOCH-SCHONLEIN PURPURA, POLYARTERITIS NODOSA
- POSTINFECTION: POST-STREP

43. PROTEINURIA

- **ESSENTIAL**
- OVERFLOW PROTEINURIA
- MULTIPLE MYELOMA
- TUBULOINTERSTITIAL
- SLE, SARCOIDOSIS, URATE NEPHROPATHY, MULTIPLE MYELOMA
- GLOMERULAR/NEPHROTIC SYNDROME
- SLE, DIABETES MELLITUS, MALIGNANT HYPERTENSION
- **SECONDARY**
- TUBULOINTERSTITIAL CAUSES
- SJOGREN'S, SCLERODERMA, VASCULAR (DM/PAPILLARY NECROSIS, SICKLE CELL)
- GLOMERULAR CAUSES
- PRIMARY GOMERULAR DISEASE (MINIMAL CHANGE, FOCAL SCLEROSIS, MEMBRANOUS GN)
- AMYLOIDOSIS

44. RENAL FAILURE, CHRONIC

- **ESSENTIAL**
- SECONDARY GLOMERULAR CAUSES: HYPERTENSION, DIABETES, SLE
- TUBULOINTERSTITIAL CAUSES (LISTED AS ESSENTIAL IN 43)
- **SECONDARY**

- PRE-RENAL CAUSES: RENAL ARTERY STENOSIS, EMBOLI
- PRIMARY GLOMERULAR DISEASE (SEE 43)
- POLYCYSTIC KIDNEY DISEASE
- TUBULOINTERSTITIAL CAUSES (SEE 43)
- POST-RENAL CAUSES

ENDOCRINE-METABOLIC

46. ADRENAL MASS

- **SECONDARY**
- CUSHING'S, PHEOCHROMOCYTOMA, CONN'S

48. NECK MASS

- **SECONDARY**
- PAINFUL CAUSES: THYROIDITIS, INFECTION, TRAUMA
- PAINLESS CAUSES: CANCER, CYSTS, ADENOMA
- 48A HYPERTHYROIDISM
- **ESSENTIAL**
- GRAVE'S DISEASE
- **SECONDARY**
- PITUITARY TUMOUR
- THYROIDITIS, MULTINODULAR GOITRE, TOXIC ADENOMA

- 48B HYPOTHYROIDISM
- **ESSENTIAL**
- HASHIMOTO'S
- **SECONDARY**
- THYROIDITIS (POSTPARTUM, SUBACUTE)
- PITUITARY FAILURE

49. ABNORMALITIES OF BLOOD CHOLESTEROL/LIPIDS

- **ESSENTIAL**
- SECONDARY CAUSES OF:
- HYPERCHOLESTEROLEMIA (LDL): NEPHROTIC SYNDROME, HYPOTHYROIDISM, CHOLESTATIC LIVER DISEASES (ESP. PRIMARY BILIARY CIRROSIS)
- HYPERTRYGLYCERIDEMIA: ALCOHOL (SEE 76), DIABETES (SEE 53)
- **SECONDARY**
- PRIMARY CAUSES OF ABNORMAL LIPIDS
- OTHER LIFESTYLE (DIET, SEDENTARY, SMOKING) CAUSES OF ABNORMAL LIPIDS

53. HYPERGLYCAEMIA, DIABETES (HYPOGLYCEMIA)

- **ESSENTIAL**
- PRIMARY CAUSES: IDDM, NIDDM (INCLUDING ALL COMPLICATIONS, DKA)
- SECONDARY CAUSES: HEMOCHROMATOSIS
- IATROGENIC HYPOGLYCEMIA
- **SECONDARY**
- SECONDARY CAUSES: PREGNANCY, ACROMEGALY, CUSHING'S, PHEOCHROMOCYTOMA, PANCREATIC INSUFFICIENCY (CHRONIC PANCREATITIS, CF)
- HYPOGLYCEMIA: POSTPRANDIAL, EXERCISE, INSULINOMA

54. ABNORMAL SERUM CALCIUM CONCENTRATION

- 54A HYPERCALCEMIA
- **ESSENTIAL**
- HYPERPARATHYROIDISM, LUNG CARCINOMA (SQUAMOUS CELL), MULTIPLE MYELOMA, SARCOIDOSIS
- **SECONDARY**
- MILK-ALKALI SYNDROME, OSTEOLYTIC METASTAES, IMMOBILIZATION, PAGET'S, VITAMIN D RELATED
- 54B HYPOCALCEMIA
- **ESSENTIAL**
- HYPOPARATHYROIDISM, PANCREATITIS, RENAL FAILURE
- **SECONDARY**
- OSTEOBLASTIC METASTASES, CALCITONIN EXCESS, LOW VITAMIN D/MALABSORPTION

NEUROSCIENCES - PART I

57. MUSCLE WEAKNESS (PARALYSIS, PARESIS)

- **ESSENTIAL**
- CNS/BRAIN STEM CAUSES: CEREBROVASCULAR ACCIDENTS (HEMORRAGE, THROMBOTIC OR EMBOLIC INFARCTION)
- SPINAL CORD CAUSES: B12 DEFICIENCY
- PNS CAUSES: GUILLAIN-BARRE SYNDROME, DIABETIC (SEE 53)/ALCOHOLIC NEUROPATHY (SEE 76)
- MYOPATHY: THYROID DISEASE (SEE 48), HYPERPARATHYROIDISM, ALCOHOL (SEE 76), POTASSIUM DISTURBANCES (SEE 40)
- **SECONDARY**
- CNS BRAIN STEM CAUSES: TUMOURS, ABCESS
- SPINAL CORD CAUSES: MULTIPLE SCLEROSIS, SPINAL CORD TUMOUR/ABCESS, ALS
- PNS CAUSE: OTHER NEUROPATHIES
- NEUROMUSCULAR JUNCTION: MYASTHENIA GRAVIS, EATON-LAMBERT SYNDROME
- MYOPATHY: MUSCULAR DYSTROPHY, POLYMYOSITIS/DERMATOMYOSITIS, CUSHING'S

58. NUMBNESS AND TINGLING

- **ESSENTIAL**
- UPPER AND LOWER EXTREMITY NERVE ROOT DISTRIBUTIONS
- CNS/BRAIN STEM CAUSES: TRANSIENT ISCHEMIC ATTACKS
- SPINAL CORD CAUSES: B12 DEFICIENCY
- PNS CAUSES: GUILLAIN-BARRE SYNDROME, DIABETIC (SEE 53)/ALCOHOLIC NEUROPATHY (SEE 76)
- **SECONDARY**
- SPINAL CORD COMPRESSION FROM METASTASES, TUMOUR, ABCESS, HEMATOMA, DISC HERNIATION
- OTHER NEUROPATHIES

60. SPEECH AND LANGUAGE DISTURBANCES

- 60A HEMIPLEGIA/HEMISENSORY LOSS APHASIA
- **ESSENTIAL**
- CEREBROVASCULAR ACCIDENT
- **SECONDARY**
- CNS TUMOR/ABCESS

61. INVOLUNTARY MOVEMENTS

- **ESSENTIAL**
- PARKINSON'S DISEASE, ALCOHOL WITHDRAWAL (SEE 76), HYPERTHYROID (SEE 48)
- **SECONDARY**
- CEREBELLAR DISORDERS, TICS AND CHOREA

62. GAIT DISTURBANCES (ATAXIA)

- **ESSENTIAL**
- ALCOHOL INDUCED CEREBELLAR ATROPHY, PARKINSON'S DISEASE
- **SECONDARY**
- OTHER CEREBELLAR DISORDERS, SPASTICITY POST-CEREBROVASCULAR ACCIDENT

NEUROSCIENCES - PART II

63. DIZZINESS AND VERTIGO

- **ESSENTIAL**
- VERTEBROBASILAR (BRAINSTEM) OR CERBELLAR CEREBROVASCULAR ACCIDENTS
- **SECONDARY**
- MULTIPLE SCLEROSIS, INNER EAR DISEASES (MENIERE'S)

65. VISION LOSS

- 65B ACUTE VISION LOSS
- **ESSENTIAL**
- TRANSIENT ISCHEMIC ATTACKS, TEMPORAL ARTERITIS

67. DIPLOPIA

- 67A DIPLOPIA
- **ESSENTIAL**
- BRAIN STEM CEREBROVASCULAR ACCIDENT
- **SECONDARY**
- BRAIN TUMOURS, MYASTHENIA GRAVIS

68. COMA (IMPAIRED CONSCIOUSNESS) AND ACUTE CONFUSION (DELIRIUM)

- **ESSENTIAL**
- CAUSES 'OUT OF THE BRAIN'
- SUBSTRATE DEFICIENCIES: HYPOXIA (SEE 30), THIAMINE (SEE 76), HYPOGLYCEMIA (SEE 53), ANEMIA (SEE 06)
- MAJOR ORGAN FAILURE: RENAL FAILURE (SEE 34), CIRROSIS/ENCEPHALOPATHY, CHF
- ELECTROLYTE ABNORMALITIES: SODIUM (SEE 37), CALCIUM (SEE 54), ACIDOSIS (SEE 31)
- ALCOHOL INTOXICATION/WITHDRAWAL (SEE 76)
- ENDOCRINE: HYPOTHYROID (SEE 48B), ADDISON'S
- HYPERTENSIVE ENCEPHALOPATHY (SEE 39)
- SEPSIS (SEE 03)
- CAUSES 'IN THE BRAIN'
- CEREBROVASCULAR ACCIDENTS, MENINGITIS/ENCEPHALITIS, SEIZURES/POST-ICTAL STATE (SEE 70)
- **SECONDARY**
- CAUSES 'OUT OF THE BRAIN'

- SUBSTRATE DEFICIENCY: HYPOPHOSPHATEMIA
- ELECTROLYTE ABNORMALITIES: MAGNESIUM
- ENDOCRINE: HYPOPITUITARISM, CUSHING'S
- CAUSES 'IN THE BRAIN'
- TRAUMA/SUBDURAL HEMATOMA

70. SEIZURES

- 70A SEIZURES IN ADULT/STATUS EPILEPTICUS
- **ESSENTIAL**
- GENERALIZED SEIZURES
- PRIMARY EPILEPSY
- **SECONDARY CAUSES**
- CNS: CEREBROVASCULAR ACCIDENTS, MENINGITIS/ENCEPHALITIS
- METABOLIC: HYPO/HYPERNATREMIA (SEE 37), HYPOCALCEMIA (SEE 54B), HYPOGLYCEMIA (SEE 53)
- ALCOHOL INTOXICATION AND WITHDRAWAL (SEE 76)
- SECONDARY
- PARTIAL SEIZURES, ABSENCE SEIZURES, PSEUDOSEIZURES
- GENERALIZED SEIZURES: HYPOMAGNESEMIA

72. DEMENTIA, MEMORY DISTURBANCES (OTHER COGNITIVE CHANGES)

- **ESSENTIAL**
- IRREVERSIBLE CAUSES
- ALZHEIMER'S, PARKINSON'S
- REVERSIBLE CAUSES
- HIV, ALCOHOL (THIAMINE), NORMAL PRESSURE HYDROCEPHALUS, HYPOTHYROIDISM (SEE 48B), SODIUM/CALCIUM DISTURBANCES (SEE 37,54), MAJOR ORGAN FAILURE
- **SECONDARY**
- IRREVERSIBLE CAUSES
- MULTI-INFARCT, CREUTZFIELD-JACOB AND PICK'S DISEASE,
- REVERSIBLE CAUSES
- SYPHILIS, BRAIN TUMORS/ABCESS, SUBDURAL HEMATOMA, FOLATE/NIACIN DEFICIENCY, WILSON'S DISEASE

74. HEADACHES

- **ESSENTIAL**
- CLINICAL SIGNS OF WORRISOME (BLEEDS, RAISED ICP) HEADACHE
- INTRACRANIAL HEMORRAGE, TEMPORAL ARTERITIS
- SECONDARY
- TENSION HEADACHES
- MIGRAINE AND OTHER VASCULAR HEADACHES
- BRAIN TUMOURS
- REFERRED PAIN

76. SUBSTANCE ABUSE

- **ESSENTIAL**
- ALCOHOLISM AND ITS MULTISYSTEM DETRIMENTAL EFFECTS

GASTROINTESTINAL

WEIGHT LOSS

- **ESSENTIAL**
- DECREASED INTAKE CAUSES
- PEPTIC ULCER DISEASE, INFLAMMATORY BOWEL DISEASE
- INCREASED METABOLISM
- HIV, HYPERTHYROIDISM (SEE 48A)
- LOSS OF NUTRIENTS
- DIABETES MELLITUS
- **SECONDARY**
- OTHER CAUSES OF DECREASED INTAKE
- MALABSORPTION
- HYPERMETABOLISM FROM UNDERLYING MALIGNANCY

94. DIFFICULTY SWALLOWING/DYSPHAGIA

- SECONDARY
- REFLUX-INDUCED STRICTURE, ESOPHAGEAL CANCER, ACHALASIA, SCLERODERMA

95. ABDOMINAL PAIN

- **95A ACUTE ABDOMINAL PAIN**
- **ESSENTIAL**
- CARDIORESPIRATORY CAUSES: PULMONARY EMBOLUS, MI, PNEUMONIA
- GASTROINTESTINAL CAUSES:
- ACUTE PANCREATITIS, PEPTIC ULCER DISEASE, ACUTE HEPATITIS, PEPTIC ULCER DISEASE, INFLAMMATORY BOWEL DISEASE, IRRITABLE BOWEL SYNDROME
- METABOLIC CAUSES: DKA
- URINARY CAUSES: UTI/PYELO
- **SECONDARY**
- GASTROINTESTINAL CAUSES: 'SURGICAL' CAUSES, ABDOMINAL MALIGNANCY
- METABOLIC CAUSES: SICKLE CELL, HENOCH-SCHONLEIN PURPURA
- GENITOURINARY CAUSES: KIDNEY STONES ALL GYNE CAUSES

95B CHRONIC ABDOMINAL PAIN

- **ESSENTIAL**
- CARDIORESPIRATORY CAUSES: ANGINA, RECURRENT PULMONARY EMBOLUS
- GASTROINTESTINAL CAUSES: PEPTIC ULCER DISEASE, INFLAMMATORY BOWEL DISEASE, IRRITABLE BOWEL SYNDROME
- **SECONDARY**
- GASTROINTESTINAL CAUSES: ESOPHAGITIS, ABDOMINAL MALIGNANCY, BILIARY COLIC, CHRONIC PANCREATITIS
- ALL GENITOURINARY CAUSES

96. HEMATEMESIS

- **ESSENTIAL**
- PEPTIC ULCER DISEASE, CIRROSIS WITH VARICES
- **SECONDARY**
- ESOPHAGITIS, UPPER GI CANCER, MALLORY-WEISS TEAR, AORTO-ENTERIC FISTULA

97. BLOOD IN STOOL

- **ESSENTIAL**
- INFLAMMATORY BOWEL, BRISK UPPER GI BLEEDING, HEMOLYTIC-UREMIC SYNDROME
- **SECONDARY**
- INFECTIOUS COLITIS, DIVERTICULAR DISEASE, ANGIODYSPLASIA, COLON CANCER, HENOCH-SCHONLEIN PURPURA

98. HEARTBURN (VOMITING/NAUSEA/ANOREXIA/INDIGESTION)

- **ESSENTIAL**
- ANGINA/MYOCARDIAL INFARCTION
- GASTROINTESTINAL CAUSES: PEPTIC ULCER DISEASE, INFLAMMATORY BOWEL
- METABOLIC CAUSES OF NAUSEA AND VOMITING: ADDISON'S, RENAL FAILURE (SEE 34, 44), HYPOTHYROID (SEE 48B), DIABETES MELLITUS (SEE 53), HYPERCALCEMIA (SEE 54A)
- **SECONDARY**
- GASTROINTESTINAL CAUSES: ESOPHAGITIS BILIARY COLIC, CHRONIC PANCREATITIS, ABDOMINAL MALIGNANCY
- NAUSEA FROM RAISED INTRACRANIAL PRESSURE

99. ABDOMINAL DISTENSION/MASS/VISCEROMEGALY/ASCITES

- **ESSENTIAL**
- HIGH ALBUMIN GRADIENT CAUSES: CIRRHOSIS (PORTAL HYPERTENSION), NEPHROTIC SYNDROME, CONGESTIVE HEART FAILURE/RIGHT HEART FAILURE/ PERICARDIAL DISEASE
- **SECONDARY**
- HIGH ALBUMIN GRADIENT CAUSES: BUDD-CHIARI, TRICUSPID REGURGITATION,
- LOW ALBUMIN GRADIENT CAUSES: PERITONEAL CARCINOMATOSIS (97%), PERITONEAL TUBERCULOSIS, PERITONEAL FUNGAL INFECTION, CHYLOUS ASCITES, PANCREATITIS
- **CAUSES OF:**
- CONSTIPATION/BLOATING
- HEPATOMEGALY
- SPLENOMEGALY (SEE 12)

100. JAUNDICE/ABNORMAL LIVER ENZYMES

- **ESSENTIAL**
  - JAUNDICE
    - PREHEPATIC CAUSES: HEMOLYSIS
    - HEPATIC CAUSES: ACUTE VIRAL HEPATITIS (ESP. B AND C), CIRROSIS, ACUTE ALCOHOLIC HEPATITIS (SEE 76)
  - ELEVATED LIVER ENZYMES
    - CHRONIC LIVER DISEASE, HEPATOCELLULAR PICTURE
      - HEPATITIS B AND C
      - HEMOCHROMATOSIS
    - CHRONIC LIVER DISEASE, CHOLESTATIC PICTURE
      - ALCOHOL (SEE 76)
      - PRIMARY BILIARY CIRROSIS
- **SECONDARY**
  - JAUNDICE:
    - PREHEPATIC CAUSES: GILBERT'S
    - HEPATIC CAUSES: ACUTE DRUG-INDUCED HEPATITIS, ISCHEMIC HEPATITIS (SHOCK LIVER)
    - POST HEPATIC CAUSES: STONES, MALIGNANCIES (PANCREATIC, AMPULLARY, CHOLANGIOCARCINOMA)
  - ELEVATED LIVER ENZYMES

- CHRONIC LIVER DISEASES, HEPATOCELLULAR PICTURE
  - ALPHA1ANTITRYPSIN DEFICIENCY, WILSON'S DISEASE, AUTOIMMUNE HEPATITIS
- CHRONIC LIVER DISEASES, CHOLESTATIC PICTURE
  - PRIMARY SCLEROSING CHOLANGITIS, INFILTRATION (FAT, AMYLOID, GRANULOMAS, MALIGNANCY)

101. CHANGE IN BOWEL HABIT

- **ESSENTIAL**
- CAUSES OF CHRONIC DIARRHEA
- ULCERATIVE COLITIS, CROHN'S DISEASE, IRRITABLE BOWEL SYNDROME
- CAUSES OF ACUTE DIARRHEA
- INFECTIONS
- HEMOLYTIC-UREMIC SYNDROME
- INFLAMMATORY
- ULCERATIVE COLITIS, CROHN'S DISEASE
- **SECONDARY**
- CAUSES OF CHRONIC DIARRHEA
- CELIAC DISEASE
- CAUSES OF ACUTE DIARRHEA
- LARGE BOWEL PREDOMINANT ORGANISMS
- SHIGELLA, CAMPYLOBACTER, E.COLI 0157, ENTAMOEBA HISTOLYTICA
- CLOSTRIDIUM DIFFICILE
- SMALL BOWEL PREDOMINANT ORGANISMS:
- VIRUSES, SALMONELLA, YERSINIA, TOXIGENIC E.COLI (TRAVELLERS),GIARDIA

Skills Objectives

Physical Examination

At the end of the eight-week clerkship, the clerk will be able to demonstrate the following clinical skills as shown by successful in-training performance evaluation reports.

IMPORTANT SKILLS TO DEMONSTRATE DURING THE MEDICINE ROTATION

1. Assess a patient's volume status.
2. Interpret vital signs.
3. Demonstrate correct technique for determining blood pressure.
4. Properly examine the fundus for diabetes, hypertension, and raised intracranial pressure.
5. Examine the thyroid. Assess thyroid function clinically.
6. Interpret jugular venous pulse.
7. Examine for signs of congestive heart failure and pericardial tamponade.
8. Examine the heart and interpret cause of murmur.
9. Examine for peripheral arterial disease.
10. Examine for the most reliable signs of:
    a. pleural effusion;
    b. consolidation;
    c. airway obstruction;
    d. loss of volume;
    e. clubbing.

11. Examine the liver. Identify signs of liver disease.
12. Examine for the presence of ascites.
13. Examine for splenomegaly.
14. Examine for lymphadenopathy
15. Perform a digital rectal examination.
16. Examine the breasts for evidence of cancer.
17. Examine the prostate and testicles for evidence of cancer or BPH.
18. Demonstrate examination of hands, knees, hips, and feet, and findings of rheumatoid arthritis.
19. Differentiate septic arthritis from osteoarthritis and rheumatoid arthritis.
20. Differentiate upper motor neuron findings from lower motor neuron findings.
21. By history and physical findings, localise a lesion to:
    a. cerebral hemisphere;
    b. brainstem;
    c. spinal cord;
    d. root or peripheral nerve
22. Perform a general screen for the musculoskeletal system (GALS).

Medical Procedures and Tests

At the end of the eight-week clerkship, the clerk will be able to, where appropriate, interpret the following procedures and tests as demonstrated by active participation in Friday Teaching Rounds, summative written examination, and the in-training performance evaluation reports. Opportunities to perform certain procedures may be limited and not expected on this rotation. However, if you are keen to observe or participate in performing procedures, please ensure you inform your supervising residents and staff so they can try to include you in any bedside procedures that may be required for your patients.

1. Arterial blood gas - Interpret

2. Urinalysis (microscopic) - Interpret patterns of:

i. glomerulonephritis;
ii. pyelonephritis;
iii. hematuria;
iv. pyuria;
v. proteinuria;
vi. crystals.

3. ECG

i. ischemia changes;
ii. supraventricular tachycardias;
iii. ventricular arrhythmias;
iv. heart block;
v. hyperkalemia.

5. **Basic Radiology - Interpret**

i. chest x-ray (pneumonia, pulmonary edema, COPD, interstitial infiltrates, nodules, pleural effusions);
ii. abdominal - three views (bowel obstruction, perforation);
iii. spine/pelvis x-rays (osteoporosis, metabolic and metastatic bone disease).
i. Thoracentesis/Paracentesis transudates;

ii. exudates.

4. Basic Spirometry – Interpret

5. Peripheral Blood Smear – Interpret

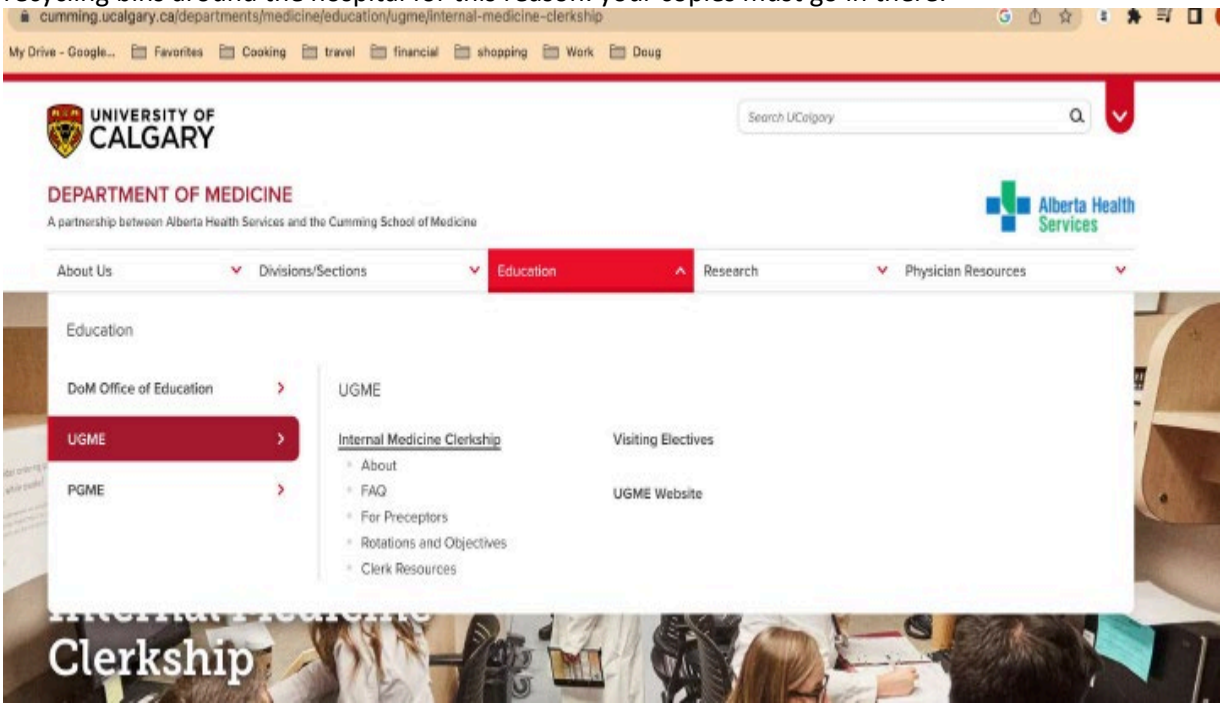
6. Fecal Occult Blood Testing

7. Pleural, peritoneal, joint fluid - Interpret

Medical Charting

At the end of the eight-week clerkship, the clerk will be able to demonstrate accurate, complete, clear, and insightful medical records as shown by successful completion of the in-training performance evaluation reports.

The medical chart is a legal document. Do not remove originals from this chart if you are leaving the unit. Make a copy first!!! Ensure all copies of patient information are kept confidential. There are confidential shredding recycling bins around the hospital for this reason: your copies must go in there.



Department of Medicine homepage, under the Education/UGME tab
https://cumming.ucalgary.ca/departments/medicine/education/ugme/internal-medicine-clerkship

Rotation and Objectives - https://cumming.ucalgary.ca/departments/medicine/education/ugme/internal-medicine-clerkship/rotations-and-objectives

Please refer to core document on OSLER - https://osler.ucalgary.ca/

Evaluation and Course Requirements
INTERNAL MEDICINE (Class of 2025)

- Final Written MCQ (summative) = MP
- Satisfactory Final Preceptor ITERS = MP
- Formative Midpoint MCQ = MC*
- MTU Midpoint Formative ITER = MC
- Selective Midpoint Formative ITERs= MC
- Logbook = MC*
- On-call Expectations = MC
- Clinical Expectations = MC
- Attendance and participation in teaching sessions = MC
- Professionalism Expectation = MP
- Meet all expectations outlined in Core Document = MC

MP = must pass (failure to do so will result in overall evaluation of "Unsatisfactory" for rotation)
MC = must complete (failure to do so will result in overall evaluation of "Satisfactory with Performance Deficiency" for rotation)
MC* = must complete before rotation deadline (failure to do so will result in requirement to defer summative examination to the deferral/rewrite date)

Please refer to Clerkship Student Handbook - https://cumming.ucalgary.ca/mdprogram/current-students/clerkship/student-handbook and core document on OSLER - https://osler.ucalgary.ca/

Assessment Dates

The assessment dates may be subject to change due to circumstances beyond the MD Program's control. In the event that an assessment date must be changed notification of the change will be emailed to the student by the evaluation team and posted on OSLER. Students will be given as much notice of the assessment date change as possible.

The schedule, including assessments, can be found on the timetable here
https://cumming.ucalgary.ca/mdprogram/current-students/pre-clerkship-year-1-2/timetable
The detailed day by day schedule is found on OSLER. https://OSLER.ucalgary.ca/

Calculators for MCQ exam – simple calculators are allowed for your exams.

Grading

The University of Calgary Medical Doctor Program is a Pass/Fail program. The grading system that will appear on a student's legal transcript is as follows:

Grade	Description
CR	Completed Requirements
RM	Remedial Work Required
F	Fail
W	Withdrawal
MT	Multi-Term (Used for Part A Courses that fall under 2 different terms in the calendar year)

For Clerkship - A rotation signed off as "Satisfactory with Performance Deficiencies" will appear as a credit on a student's medical school transcript.

One45 by Acuity Insights Overview

The MD Program utilizes the One45 Software Program for assessment purposes for all evaluations in Year 1, 2 and 3. Students are able to view completed evaluations online through this software program. Evaluations and assessment data are collected at regular intervals.

It is the student's responsibility to distribute their evaluations to preceptors and to follow up with preceptors if evaluations have not been completed by the deadline given out by the Undergraduate Medical Education (UME) Office.

In addition to assessments and evaluations, One45 is also utilized to evaluate your preceptors and to gather information from students on their learning experiences.

All students are provided training at the beginning of their program in Year 1. This would include a personal log in access code and password.

One45 by Acuity Insights is used throughout your training in the MD Program (Undergrad).
Website Link to Access One45 by Acuity Insights: https://calgary.one45.com/

Course Evaluation/Feedback
Student feedback will be sought at the end of each learning session as well as at the end of each course through the electronic UME evaluation tool. At the end of each learning activity (ie. Lecture, small group, orientations, etc.), students will be asked to complete online evaluation forms to provide feedback to instructors regarding the effectiveness of their teaching and achievement of the learning objectives. An overall course evaluation will be completed following course completion. Students are welcome to discuss the process and content of the course at any time with the Course Chairs or Preceptors.

Internet and Electronic Device Information and Responsible Use
Students are welcome to use laptops and other electronic note-taking devices in this course unless otherwise stated. Please be considerate of others when using these devices. The use of laptop and mobile devices is acceptable when used in a manner appropriate to the course and classroom activities. Please refrain from accessing websites and resources that may be distracting to you or for other learners during class time. Students are responsible for being aware of the University's Internet and email use policy https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-electronic-resources-and-information-policy

Professional Conduct
Students, employees, and academic staff are also expected to demonstrate behaviour in class that promotes and maintains a positive and productive learning environment. As members of the University community, students, employees, and academic staff are expected to demonstrate conduct that is consistent with the University of Calgary Calendar, the Code of Conduct and Non-Academic Misconduct policy and procedures, which can be found at: https://calendar.ucalgary.ca/uofcregs/university-regulations/integrity-conduct Students and staff are expected to model behaviour in class that is consistent with our professional values and ethics to promote and maintain a positive and productive learning environment. All students and staff are also expected to respect, appreciate, and encourage expression of diverse world views and perspectives. While critical thought and debate is valued in response to concepts and opinions shared in class, feedback must, at all times, be focused on the ideas or opinions shared and not on the person who has stated them.

Where a breach of an above-mentioned expectation occurs in class, the incident should be reported immediately to the Associate Dean or his/her designate. As stated in the University Calendar, students who seriously breach these guidelines may be subject to a range of penalties ranging from receiving a failing grade in an assignment to expulsion from the University.

University of Calgary Medical School – Student Code of Conduct
https://cumming.ucalgary.ca/mdprogram/current-students/pre-clerkship-year-1-2/student-code-conduct
University of Calgary - Integrity and Conduct
https://calendar.ucalgary.ca/uofcregs/university-regulations/integrity-conduct

Attendance and Participation Expectations
All learning events are mandatory. Attendance will be taken.

Reappraisals and Appeals
Please refer to the CSM Reappraisal of Graded Term Work and Academic Assessments and CSM UME Academic Assessment and Graded Term Work Procedures for details regarding reappraisals and appeals https://cumming.ucalgary.ca/mdprogram/about/governance/policies#c Please note by policy and terms of reference if the student plan to request a reappraisal of the result(s) of this exam/course, a formal reappraisal request in writing needs to be submitted to the Chair of Student Evaluation within 10 business days of receiving the result. Please refer to the CSM Reappraisal of Graded Term Work and Academic Assessments for further information. (https://cumming.ucalgary.ca/mdprogram/about/governance/policies) (under C). When a reappraisal has been submitted, any scheduled rewrite exams for that course will be on hold, depending on the outcome of the Reappraisal. Unless, under extenuating circumstances, and at the request of the student an early rewrite may be granted, if approved by the appropriate Assistant or Associate Dean. Chair of Student Evaluation Email - md.reappraisals@ucalgary.ca Please complete the CSM Reappraisal Submission Form on the UME website to ensure all information has been included. (https://cumming.ucalgary.ca/mdprogram/about/governance/policies) – (under C) If the student disagrees with the decision of the UME Student Evaluation Committee, the student may appeal that decision to the UME University Faculty Appeals Committee.

Academic Accommodation
It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The Student Accommodations policy is available at https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations. Students needing an accommodation because of a disability, or medical concerns should communicate this need to Student Accessibility Services (SAS) in accordance with the Procedure for Accommodations for Students with Disabilities https://www.ucalgary.ca/legal-services/university-policies-procedures/student-accommodation-policy.

For Student Accessibility Services, please contact the office at (403) 210-6019, visit: MacEwan Student Centre room 452, or email: access@ucalgary.ca. Students who have not registered with the Student Accessibility Services are not eligible for formal academic accommodation.

Students who require an accommodation in relation to their coursework or to fulfil requirements for a graduate degree based on a protected ground other than disability should communicate this need, preferably in writing, to the appropriate Assistant or Associate Dean

Students who require an accommodation unrelated to their coursework, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Vice-Provost (Student Experience).

For additional information on support services and accommodations for students with disabilities, visit https://live-ucalgary.ucalgary.ca/student-services/access

Academic Integrity

The University of Calgary is committed to the highest standards of academic integrity and honesty. Academic integrity is a core value of the University of Calgary. At UCalgary, academic integrity is a commitment to, and the demonstration of, honest and responsible scholarship. Maintaining academic integrity while earning your degree represents your true academic accomplishments. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect.

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity.

Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional code of conduct and promote academic integrity in upholding the University of Calgary's reputation of excellence.

Student Academic Misconduct Policy and Procedure:
https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-policy
https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-procedure

Additional information is available on the Academic Integrity Website at
https://ucalgary.ca/student-services/student-success/learning/academic-integrity

Academic Misconduct

Academic Misconduct refers to student behavior which compromises proper assessment of a student's academic activities and includes cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

For information on the Student Academic Misconduct Policy and Procedure please visit:
https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-policy
https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-procedure

Additional information is available on the Academic Integrity Website at:
https://ucalgary.ca/student-services/student-success/learning/academic-integrity

Research Ethics
If a student is interested in undertaking an assignment that will involve collecting information from members of the public, he or she must speak with the Assistant Dean, Research (UME) and consult the CHREB ethics website (https://ucalgary.ca/research/researchers/ethics-compliance/chreb) before beginning the assignment. Students are advised that any research with human participants – including any interviewing (even with friends and family), opinion polling, or unobtrusive observation – must have the approval of the Conjoint Faculties Research Ethics Board (https://research.ucalgary.ca/conduct-research/ethics-compliance/human-research-ethics/conjoint-faculties-research-ethics-board-cfreb) or the Conjoint Health Research Ethics Board https://research.ucalgary.ca/conduct-research/ethics-compliance/human-research-ethics/conjoint-health-research-ethics-board-chreb) For further information see E.5 Ethics of Human Studies: https://calendar.ucalgary.ca/pages/627ed88eb4b041b7a2e8155effac3501 For more information on ethics and compliance visit: https://research.ucalgary.ca/conduct-research/ethics-compliance

Intellectual Property
Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the instructor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

Emergency Evacuations and Assembly Points
Assembly points for emergencies have been identified across campus. The primary assembly point for the Health Sciences Centre (HSC) building is HRIC - Atrium. For more information, see the University of Calgary's Emergency Management website: https://www.ucalgary.ca/risk/emergency-management/evac-drills-assembly-points/assembly-points In the case of an emergency during exam, immediately stop writing the examination and follow the direction of the invigilator and go to the nearest exit. Students should not gather personal belongings. Emergency Evacuation Procedures - https://www.ucalgary.ca/risk/emergency-management/plans-and-procedures.

Supports for Students
Student Advocacy and Wellness Hub (SAWH): https://cumming.ucalgary.ca/mdprogram/current-students/student-advising-wellness AMA Physician and Family Support Program: https://www.albertadoctors.org/services/physicians/pfsp Student Wellness Services: https://www.ucalgary.ca/wellness-services Safewalk: http://www.ucalgary.ca/security/safewalk Campus security: call (403) 220-5333 Student Success Centre: https://ucalgary.ca/student-services/student-success Libraries and Cultural Resources: http://library.ucalgary.ca/ Student Union: https://www.su.ucalgary.ca/about/who-we-are/elected-officials/ Graduate Student's Association: https://gsa.ucalgary.ca/about-the-gsa/gsa-executive-board/ Student Ombudsman: http://www.ucalgary.ca/ombuds/role

Wellness and Mental Health Resources
The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness, and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the excellent mental health resources available throughout the University community such as counselling, self-help resources, peer support, or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, https://www.ucalgary.ca/wellnesscentre/services/mental-health-services) and the Campus Mental Health Strategy website (http://www.ucalgary.ca/mentalhealth).

Freedom of Information and Protection of Privacy
Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary. For more information, please see: https://www.ucalgary.ca/hr/work-compensation/working-ucalgary/freedom-information-and-privacy-act

Copyright Legislation
All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy) and requirements of the copyright act (https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks, etc.) Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy https://www.ucalgary.ca/legal-services/university-policies-procedures/student-non-academic-misconduct-policy.

Sexual and Gender-Based Violence Policy
The University recognizes that all members of the University Community should be able to learn, work, teach and live in an environment where they are free from harassment, discrimination, and violence. The University of Calgary's sexual violence policy guides us in how we respond to incidents of sexual violence, including supports available to those who have experienced or witnessed sexual violence, or those who are alleged to have committed sexual violence. It provides clear response procedures and timelines, defines complex concepts, and addresses incidents that occur off-campus in certain circumstances. Please see the policy available at https://www.ucalgary.ca/legal-services/university-policies-procedures/sexual-and-gender-based-violence-policy

ATSSL Guidelines
Please refer to the ATSSL Web Lab PPE Requirement: https://cumming.ucalgary.ca/mdprogram/about/governance/policies

UME Policies, Guidelines and Terms of References (TORs)
Please refer to the MD program website: https://cumming.ucalgary.ca/mdprogram/about/governance

UME Forms
Please refer to the MD program website:

https://cumming.ucalgary.ca/mdprogram/current-students/student-resources/student-forms