

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (RADIOTHERAPY & ONCOLOGY) PART II EXAMINATION**  
**JANUARY 1993**

Date: 18<sup>th</sup> January 1993

Time: 1.30 p.m. - 4.30 p.m.

**PAPER I**

**Three separate answer books are provided. One for each section of the paper.  
If the examiners cannot read your writing they will be unable to give you full credit  
for your knowledge.**

1. Discuss the management of carcinoma of undetermined primary in the neck.
  
2. A 30-year-old male has a testicular mass with a large opacity in the right lung.  
Discuss the management.
  
3. A 30-year-old male, who had been treated for Hodgkin's disease, complains of  
loss of weight and loss of appetite.

His ESR was 110 mm first hour, and his hemoglobin was 8.5gm. Discuss the  
management.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (RADIOTHERAPY AND ONCOLOGY) PART II EXAMINATION**  
**JANUARY, 1993**

Date: 19<sup>th</sup> January 1993

Time: 1.30 p.m. - 4.30 p.m.

**PAPER II**

**Three separate answer books are provided one for each section of the paper.  
If the examiners cannot read your writing they will be unable to give you full credit  
for your knowledge.**

1. List the tumors of the maxillary antrum. Describe in detail the radiotherapy treatment technique of a T3 No Mx maxillary antral tumor.
2. A 6-year-old is admitted to hospital with abdominal pain and diarrhea, and was found to have a large mass in the right lumbar region. Discuss the management.
3. Describe the Brachytherapy methods used in the treatment of cancer of the cervix and the complications it may cause.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION –**  
**FEBRUARY, 2002**

Date :- 7<sup>th</sup> February, 2002

Time:- 9.00 a.m. 12.00 noon

**PAPER I**

**Answer all three questions.**

**Three separate answer books are provided. One for each question.**

**If the examiners cannot read your writing they will be unable to give you full credit for your knowledge.**

1. Describe the problems associated with the use of cytotoxic drugs during pregnancy complicated by a malignancy.
  
2. Give an account on general features at Head and Neck cancers.  
Suggest a treatment strategy for a T3 N1 M0 cancer of the oropharynx involving the right tonsils and soft palate extending beyond the midline, including the follow-up explaining the reasons for your suggestions.  
Mention new strategies which claim improved Disease Free Survival and possibly Overall Survival in the management of Head and Neck cancers quoting examples.
  
3. Describe the management of bladder cancer. (details of radiotherapy techniques are not necessary)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**FEBRUARY, 2002**

Date :- 7<sup>th</sup> February, 2002

Time:- 1.30 p.m. 4.30 p.m.

**PAPER II**

**Answer all three questions.**

**Three separate answer books are provided. One for each question.**

**If the examiners cannot read your writing they will be unable to give you full credit for your knowledge.**

1. Give an account on systemic therapeutic approaches to metastatic breast cancer.
  
2. A 25 year. old married female who had a total thyroidectomy 2 years ago for a differentiated thyroid cancer complains of cough during a routine visit. Her serum thyroglobulin level was markedly elevated. Discuss the management.
  
3. Concern is sometimes expressed regarding value of active therapy in patients with advanced and incurable cancer. Discuss the use of radiotherapy and chemotherapy for palliation in such patients. How might these treatments be appropriately applied to the management of a patient with advanced metastatic colon cancer involving liver and bones.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION –**  
**NOVEMBER, 2002**

Date :- 6<sup>th</sup> November, 2002

Time:- 9.00 a.m. 12.00 noon

**PAPER I**

**Answer all three questions.**

**Three separate answer books are provided. One for each question.**

**If the examiners cannot read your writing they will be unable to give you full credit for your knowledge.**

1. Give a classification of soft tissue sarcomas of adults.

Discuss the management of a suspected leiomyosarcoma of soft tissue.  
The tumour is 3 x 3 cm in size, arising from the lower third of the right fore arm of a 50 years old fire-officer who is right handed.

2. What are the general principles of pain assessment ?

Describe how you would manage and control pain, using drugs other than anticancer agents in malignant disease.

3. Describe the long term sequelae associated with radical neuraxial irradiation of a 4 year old girl who has been treated for a primitive neuro ectodermal tumour (medulloblastoma) of the posterior fossa. How might they be avoided or minimized.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION –**  
**NOVEMBER, 2002**

Date :- 6<sup>th</sup> November, 2002

Time: 1.30 p.m. - 4.30 p.m.

**PAPER II**

**Answer all three questions.**

**Three separate answer books are provided. One for each question.**

**If the examiners cannot read your writing they will be unable to give you full credit for your knowledge.**

1. Describe the paraneoplastic syndromes, their symptoms & signs and mechanisms where known.

2. "Oesophageal cancers are difficult to treat radically" - Discuss.

Describe the treatment of a middle one third squamous cell carcinoma of the oesophagus affecting a 68 year old female with liver metastases.

3. Give the differential diagnosis of a mediastinal mass seen on a plain X-ray of a 26 year old unmarried female.

What is the management of this patient who has been diagnosed as having stage II B mixed cellularity Hodgkin's disease with a bulky mediastinal mass ?

What are the advantages and disadvantages of the combination chemo therapy regimes you would prescribe in this situation ?

What are the treatment options if the lady relapses 1 year after your treatment has been completed ?

Give an estimate of the cure rate for this patient.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**JUNE , 2006**

Date : 26<sup>th</sup> June, 2006

Time : 2.00 p.m. - 4.00 p.m.

**PAPER I**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. Under a programme for the development of cancer treatment services in Sri Lanka, it is planned to setup a Radiation Treatment Facility in Kurunegala, serving a population of 2 million. As a Clinical Oncologist, explain what equipment you would advise to be installed. Give reasons for the choice of the selected equipment, taking into consideration the types and incidence of malignant disease.
  
2. Cervical carcinoma is a very common cancer amongst Sri Lankan women. Given the locally available resources give evidence based reasons for a population based screening programme and discuss how you would go about setting up this service.
  
3. Whilst treating a patient with cancer of the uterine cervix using a high dose rate brachytherapy machine the high energy Iridium source failed to return into the source container of the machine. This resulted in the Radiographer and the patient being exposed to some degree of accidental radiation. As a Clinical Oncologist and the Head of the Radiation Therapy Unit describe how you would manage this incident.
  
4. The skeleton is the site most commonly affected by metastases as many cancers have the propensity to spread to bone. What morbid conditions can occur due to skeletal metastases. Discuss the treatment options available.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**JUNE., 2006**

Date : 27<sup>th</sup> June, 2006

Time : 9.00 a.m. -12.00 noon.

**PAPER II**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. A 31 year old woman complains of a 2-month history of progressive tiredness, and episodes of light-headedness. She has noticed that she bruises very easily and has also had very heavy periods for the past 4 months. She has lost 4kg in weight, partly by dieting but admits to early satiety. Examination shows resolving ecchymoses on her arms. Her spleen is palpable 3 cm below the costal margin, but there is no hepatomegaly or palpable lymphadenopathy. One year ago she was anaemic with a haematocrit of 40% and WBC of  $12.6 \times 10^9 /l$ . Further details of her blood count at that time are not available.
- a. What investigation do you now wish to perform ? (10 marks)
- b. What other investigations will you now request ? (20 marks)

The blood film shows a normochromic normocytic anaemia, a neutrophil leucocytosis with immature forms, basophilia and thrombocytosis. There are 2% blasts.

- c. What are the differential diagnoses ? (10 marks)

Philadelphia chromosome is positive.

WBC is  $210 \times 10^9/l$ . (normal  $4.5-10 \times 10^9/l$ )

Platelets are  $450 \times 10^9/l$  (normal  $150 - 450 \times 10^9/l$ )

- d. What is your planned management for this patient ? (30 marks)
- e. What complications of this disease may occur and how would you detect them ? (10 marks)
- f. Suggest an appropriate management for these complications. (10 marks)
- g. How would you counsel the patient and her family if these complications occur ? (10 marks)



2. A 3-year-old boy's mother finds a 4 x 5 cm lump in his right upper abdomen while she is bathing him. There is no history of trauma or abnormal bleeding and he is well.

a. What are the most important differential diagnoses ? (20 marks)

The abdominal ultrasound scan shows a mass at the upper pole of the right kidney with no involvement of the right renal vein. There is no calcification within the mass and no abdominal or pelvic lymphadenopathy.

b. What is the likely diagnosis ? (10 marks)

c. Name two syndromes which may be associated with this condition. (10 marks)

The chest x-ray is normal. The child undergoes right nephrectomy. The histology shows only favourable features.

d. What favourable and unfavourable histological features are recognised in this condition? (25 marks)

e. How would you manage the child now ? (35 marks)

3. Concerning paediatric oncology:

a. What are the most commonly occurring malignancies in Sri Lanka in order of incidence? (20 marks)

b. Classify Central Nervous System tumours and give approximate percentages for their occurrence. (20 marks)

c. What cerebral structures constitute the supra-tentorium ? (10 marks)

d. What are the presenting symptoms of supra-tentorial tumours ? (10 marks)

e. What are the special problems associated with delivering radiotherapy to a young child ? (20 marks)

f. What are the possible long term complications of cerebral irradiation in childhood ? (20 marks)

4. A 21 year old man who is undergoing chemotherapy for Ewing's sarcoma comes to the ward with fever and rigors of one day's duration. He has a double lumen Hickman line in place.

a. What is your initial management of this man ? (25 marks)

The peripheral blood count shows Hb 10 g/dl (normal 12 - 15 g/dl), WBC  $1.1 \times 10^9/l$  (normal  $4.5 - 10 \times 10^9/l$ ), Neutrophils  $0.1 \times 10^9/l$ , Platelets  $160 \times 10^9/l$  (normal  $150 - 450 \times 10^9/l$ ).

b. What is your management now ? (20 marks)

Blood cultures are normal apart from the sample taken through the central venous cannula which shows a moderate growth of Methicillin resistant *Staphylococcus aureus*.

c. What management decisions will you take now ? (25 marks)

d. What are the common complications of central venous lines and their placement ? (15 marks)

e. What other options are available for achieving venous access and what are their advantages and disadvantages ? (15 marks)

5. A 35 year old woman presents with a 2-month history of swelling of the right arm and an enlarging mass in the axilla. She looks ill and is anaemic and slightly breathless. There are no other palpable masses and no organomegaly.

Full Blood Count and biochemistry are normal apart from ESR 90mm/hr and LDH 650u/l (normal <250 u/l).

Ultrasound scan of abdomen and pelvis are normal. Chest x-ray shows a small pleural effusion and mediastinal widening.

Biopsy of the axillary mass at a base hospital reveals an undifferentiated carcinoma.

a. What are the 3 most likely differential diagnoses ? (20 marks)

b. What further investigations would you discuss with the Histopathology department to confirm the diagnosis ? (30 marks)

c. Outline your management of this condition. (50 marks)

"

6. A 23-year old unmarried man presents with a right testicular swelling. He has a history of inguinal hernia repair at the age of 4 years. Ultrasound shows a solid mass in the testis and right inguinal orchidectomy is performed. Histology shows a 5x4x4cm classical seminoma with no vascular invasion and no involvement of the spermatic cord. He is referred to you for further management.

- a. What is your initial management ? (20 marks)
- b. Describe which investigations you would perform. (30 marks)

Investigations show no sign of disease elsewhere.

- c. What are the treatment options which you would discuss with him ? (50 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**JUNE., 2006**

Date : 27<sup>th</sup> June 2006

Time : 1.00 p.m. - 4.00 p.m.

**PAPER III**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. A 40 year-old man presents with a 2 week history of feeling ill, bleeding from the gums, fever, red marks on his skin and passing red urine. On examination there is no palpable lymphadenopathy.

Full Blood Count shows Hb 9 g/dl (normal 12-15 g/dl)

WBC  $1.9 \times 10^9/l$  (normal  $4.5-10 \times 10^9/l$ )

50% Neutrophils

Platelets  $10 \times 10^9/l$  (normal  $150 - 450 \times 10^9/l$ ).

The peripheral blood film shows myeloblasts. Chest X-ray, and ultrasound scan of the abdomen and pelvis were normal. Urine microscopy shows 20 - 30 red blood cells per high power field. Blood and urine cultures show no sign of infection. Bone marrow aspiration and trephine biopsy confirms Acute Myeloid Leukaemia (FAB M3 type).

- a. From which additional haematological condition is this man suffering ?  
(10 marks)
- b. What investigations would you request in order to confirm the diagnosis ?  
(20 marks)
- c. What is the cytogenetic abnormality in Acute Myeloid leukaemia (FAB M3 type) ?  
(10 marks)
- d. Discuss your plan of management.  
( 40 marks)
- e. What is the expected prognosis ?  
(20 marks)

2. A 45 year old married woman with 5 children presents with post-coital bleeding for 6 months. Clinical examination reveals a 'barrel-shaped' cervix with complete fixation of the right parametrium. Biopsy shows a squamous carcinoma of large cell type.
- a. How does the biology of a 'barrel-shaped' growth affect management ?  
(15 marks)
  - b. What investigations will you request prior to commencing treatment, giving reasons for your decision ?  
(15 marks)
  - c. What are the commonest complications of this condition and how should they be managed ?  
(20 marks)
  - d. How would you manage this woman ?  
(50 marks)
3. An otherwise fit woman presents with multiple osseous metastases of the skull from a follicular carcinoma of the intact thyroid.
- a. How will you manage this woman ? Give full details of all treatment which you prescribe.  
(50 marks)
  - b. What acute and long term side effects will you discuss with the patient ?  
(20 marks)
  - c. What are the pre-requisites for successful ablation of thyroid tissue using radio-iodine ?  
(30 marks)
4. A 50-year-old heavy smoker who consumes 60 units of alcohol per week presents with a feeling of discomfort in the throat and a lump in the neck. He is found to have a T2N2MO squamous carcinoma of the right pyriform fossa. He refuses any form of surgery.
- a. Describe your management of this case and give full details of any treatment which you propose.  
(60 marks)
  - b. What quality assurance would you require to ensure the accuracy of treatment ?  
(40 marks)

5. A 53 year old man presents with haematuria and on cystoscopy is found to have a pT3G2 transitional cell carcinoma of the bladder. It is decided to offer non-surgical treatment.

- a. Describe your treatment schedule including details of any radiotherapy techniques where relevant. (60 marks)

18 months after completing the above treatment he presents with bilateral leg swelling and is found to have para-aoartic lymph node enlargement. Needle biopsy confirms metastatic transitional cell carcinoma.

- b. What further management would you advise ? (40 marks)

6. A 30-year-old unmarried woman with a family history of breast cancer undergoes wide local excision and level 2 axillary lymphadenectomy of a 2.5cm mass from the upper outer quadrant of, the left breast. Histology shows 1.8cm Grade 2 infiltrating ductal carcinoma with surrounding focal ductal carcinoma in situ. Margins are more than 2cm clear from invasive carcinoma and at least 0.8cm clear from DCIS. Five out of 11 nodes are positive, two with extracapsular spread. Immunohistochemistry shows Oestrogen and Progesterone receptor negative, HER2 strongly positive (IHC method), high S-phase fraction and DNA ploidy.

- a. Briefly explain the significance of each of the prognostic factors. (20 marks)

- b. What treatment will you advise ? (30 marks)

One year after completion of this treatment she presents with headache, dysphagia and paraesthesia in the buttocks and thighs.

- c. What is your differential diagnosis ? (20 marks)

- d. What investigations would you undertake to make a definitive diagnosis ? (20 marks)

Lumbar puncture reveals malignant cells.

- e. How will you manage this patient ? (10 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**AUGUST, 2007**

Date : 27<sup>th</sup> August, 2007

Time : 2.00 p.m. - 4.00 p.m.

**PAPER I**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. What are the common inherited cancers ? How would you advise a young woman with rectal cancer, whose father has already died of the disease, who asks about the risk to her children ?
  
2. What are the common errors in radiotherapy treatment ? Describe the measures which you would implement to ensure high quality radiotherapy for the patients treated in your unit ?
  
3. What are the late effects of cancer treatment on survivors ? Discuss these problems with special reference to the treatment of a young woman with node positive breast cancer.
  
4. Chemoradiation is widely used as curative treatment for many cancers. In which cancers do you think that chemoradiation plays an important role ?

Discuss the advantages and disadvantages of chemoradiation in this context.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**AUGUST, 2007**

Date : 28<sup>th</sup> August, 2007

Time : 9.00 a.m. - 12.00 noon

**PAPER II**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. A frail 70 year old woman presents with a 3 month history of weight loss, anorexia, alteration in bowel habit and recent abdominal swelling. Her performance status is 2 (ECOG). Cross sectional imaging shows a large amount of ascites, 8. large solid and cystic pelvic mass, widespread peritoneal seedlings and extensive omental disease. Her albumen is 23g/litre, serum creatinine is 300mmol/litre and Ca125 is 420 but biochemistry and full blood count are otherwise normal. Her family refuse surgery as they feel that she is too ill to survive the operation.

A. What is your initial management ? (15 marks)

Cytology of ascitic fluid shows adenocarcinoma.

B. How will you treat her now? Support your decision with evidence from the literature. (35 marks)

After 4 cycles of treatment she is very much better, her Ca125 is 20ku/litre, and repeat imaging shows resolution of the peritoneal seedlings and omental disease, and the pelvic mass is much smaller.

C. What will you discuss with her now ? (25 marks)

You now continue with 4 further cycles of chemotherapy. Her Ca125 after completion of the last cycle is 12ku/litre and imaging shows no residual disease.

D. How will you follow her up? Give reasons for your decision. (25 marks)



2. A 68-year-old man presents with a 3 month history of backache, weight loss and tiredness. For the past 3 days he has had increasing weakness in the legs and on the day that you see him he is unable to stand. He is constipated and has dribbling incontinence. X-rays of the spine show widespread sclerotic metastases affecting every vertebra.

On examination he has a sensory level at the umbilicus, and the power in both limbs is reduced to 3/5. Both plantar responses are up going. He has a small, hard irregular prostate gland with obliteration of the medial sulcus and a smooth mass arising out of the pelvis almost to the level of the umbilicus.

- A. What is your initial management ? (35 marks)

The PSA is 1,300 u/litre. Serum creatinine, blood urea slightly elevated. Alkaline phosphatase 390 u/litre. Hb 10Gm/litre, wbc  $3.0 \times 10^9$ /litre, platelets  $100 \times 10^9$ /litre. Biochemistry otherwise normal.

- B. How will you manage him now ? (35 marks)

There is some recovery of function and he can stand unaided and walk with support. Renal function has returned to normal.

- C. What is your management now ? (30 marks)

3. A 60 year old man presents with a 6 month history of rectal bleeding and is found to have a carcinoma of the anal margin extending superiorly 2cm up the anal canal as far as the anal sphincter and inferiorly involving 1cm of skin of the anal canal. There is no palpable lymphadenopathy. The surgeon has advised abdomino-perineal resection and formation of a permanent colostomy but he is anxious to avoid this and asks for a second opinion.

- A. What will you tell him ? (60 marks)

- B. How will you manage him ? (40 marks)

4. A 4 year old boy presents with several weeks of intermittent fever and bone pain. The child has pallor, petechiae, purpura, adenopathy and hepatosplenomegaly. Laboratory studies include Hb 8.5g%, WEC 15,000/cmm, (10% polymorphonuclear neutrophils, 80% lymphocytes and 10% blasts) Platelets 35,000/cmm,

A. What are the specific investigations you wish to perform ?  
(10 marks)

Bone marrow aspiration shows 90% lymphoblasts.

Immune markers show CD 10 - 70%, CD 19- 80%, 3- 2%, 5-0%, 13- Neg. CD 33- Neg.

Chromosome analysis shows 47 XY with a t(12:21) translocation.

B. What is the diagnosis ?  
(10 marks)

C. What specific measures you would take in the ward for this child prior to treatment ?  
(25 marks)

D. What are the treatment phases of ALL therapy ? What specific drugs would you use to treat this child ?  
(25 marks)

E. What are the adverse risk factors in childhood ALL ?  
(30 marks)

5. Write short notes on your management of the following:

A. Osteoradionecrosis of the mandible  
(20 marks)

B. Upper limb oedema following axillary radiotherapy  
(20 marks)

C. Radiation proctitis  
(20 marks)

D. Ovarian failure after pelvic radiotherapy  
(20 marks)

E. Chronic aspiration on swallowing following radical radiotherapy for a carcinoma of the supraglottic larynx.  
(20 marks)

6. A married 35 year old woman with 2 children presents with irregular bleeding per vaginum of 3 weeks duration. Ultrasonography of the abdomen and pelvis shows an enlarged uterus of 12 weeks size with a heterogeneous mass within the uterine cavity. No vesicles or foetal sac were identified on the ultrasonograph. The chest X-ray shows 5 rounded opacities distributed within the parenchyma of both lungs. A Computerized Axial Tomography (CT) scan confirms the presence of metastatic hmg disease as seen on the chest X-ray. The serum ~ Human Chorionic Gonadotrophin (~HCG) is 250,000 mIU/ml and falls to 150,000 mIU/ml 8 weeks following a vacuum extraction of the uterine contents. The patient gives a history of an abortion less than 3 months ago.
- A. What is this patient's diagnosis ? (10 marks)
- B. What pathological features would you expect to see in the evacuated products ? (20 marks)
- C. On what basis would you decide the treatment protocol ? (20 marks)
- D. Discuss how you would manage this patient ? (35 marks)
- ''' E. What is your advice regarding further child bearing ? (15 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**AUGUST, 2007**

Date : 28<sup>th</sup> August, 2007

Time : 1.00 p.m. - 4.00 p.m.

**PAPER III**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. A 2 V2 yr old boy was admitted to a Base hospital, Matara with a right iliac fossa mass of 2 weeks with associated fever & abdominal pain. Biopsy of the mass was done at Matara Hospital and reported as 'small round cell tumour'. (Matara is a Base hospital in Sri Lanka)

Following investigations were available.

Hb 11.9g%  
WBC 4500/mm<sup>3</sup> N- 44% L 46% E- 8%  
Platelet count 220,000/mm<sup>3</sup>  
LDH -1317  $\mu$ /l  
Serum creatinine - 62 m mols/l  
Liver Function Tests - normal  
CXR - normal

At Cancer Institute, Maharagama CT scan - mass in right side of pelvis pushing the bladder to left side, enlarged mesenteric nodes and para aortic nodes up to the level of kidneys, liver is moderately enlarged, spleen is enlarged.

- A. What is the most likely diagnosis ? (10 marks)
- B. What special investigations you would need to establish the diagnosis ? (10 marks)
- C. What additional information you would need to stage this disease ? (10 marks)
- D. What measures you would initiate in ward ? (20 marks)

During the 1st day of the treatment child's urine output dropped to 10 ml/m<sup>2</sup>/hour. urine became cloudy, and serum creatinine rose to 324 mmols/l .

- E. What is the possible diagnosis ? (10 marks)
- F. What are the metabolic complications you would encounter ? (15 marks)
- G. How would you manage him ? (20 marks)
- H. What other drugs you would use if available ? (05 marks)
2. A 60 year old man presents with nasal obstruction and is found to have a squamous carcinoma of the maxillary antrum. CT scan demonstrates erosion of the floor of the orbit but no extension into the orbit. There is no other obvious bone erosion.
- A. What clinical signs and symptoms would you expect to find and why ? (30 marks)
- B. How would you manage this patient ? Give full details of any radiotherapy techniques described. (70 marks)
3. A 45 year old man presents with a 2 months history of cough and pain in the left arm. Chest x-ray shows an apical opacity and CT scans demonstrates the known the apical tumour, erosion of the neck of the first rib, but no hilar, mediastinal or hepatic metastases. CT guided biopsy shows a moderately differentiated squamous carcinoma.
- A. What is the stage of disease ? (10 marks)
- B. What clinical signs might you expect to find on examination ? (20 marks)
- C. How would you manage this patient giving full details of any treatment which you advise? (70 marks)

- 4.
- A. What is the annual incidence of cancer in Sri Lanka ?  
(10 marks)
  - B. Discuss the distribution of malignant disease in the developing and developed world. What are the five commonest cancer in each ?  
(40 marks)
  - C. The incidence of cancer is increasing through out the world. Discuss reasons for this.  
(50 marks)

5. A 43 year old woman with acute ill health and is found to have a bone marrow evidence of multiple myeloma with extensive bone involvement. Initial investigation shows

WBC  $9.0 \times 10^9/L$  ( $4.5 - 10 \times 10^9/L$ )

Hb% 7.8 g/dl

Platelets  $200 \times 10^9/L$

Serum Creatinine 500m mol/l (70-150 m mol/l)

Blood urea 85 mg/dl (8-25 mg/dl)

Ca<sup>++</sup> 3.78 m mol/L

K<sup>+</sup> 5.0 m mol/L

Na<sup>+</sup> 140 m mol/L

- A. What are the problems that you have to address in this patient ?  
(20 marks)
- B. Discuss the management of each condition.  
(60 marks)
- C. What are the treatment related problems which you may encounter ?  
(20 marks)

6. 27 years old mother of one child presented with a painless swelling in Left thigh gradually enlarging over 2-3 months.  
No systemic symptoms.  
No significant past medical history.

On examination there was a soft tissue swelling in L thigh extending from anterior to posterolateral aspect. Size 15x15cm.  
Joint movements are preserved, vascular and neurological systems not affected.

Other systems are clinically normal.

Her Investigations are as follows:

General haematological and biochemical parameters normal.

CXR - normal

MRI- thigh- mass lesion in anterior femoral compartment

CT Chest- multiple small pulmonary nodules in both lung fields suggestive of metastasis.

True-cut biopsy- small round cell tumour

- A. What-are the differential diagnosis ? (10 marks)
- B. What are the other investigations you would like to do in order to arrive at a diagnosis, explain briefly ? (10 marks)
- C. If this tumour is diagnosed as Ewing's sarcoma what other investigations you would like to do in this patient ? (10 marks)
- D. Name the drug combination which you would use to treat this patient with Ewing's sarcoma? What precautions would you take to counteract side effect of the chemotherapy ? (30 marks)

She shows a good response to chemotherapy at the end of six cycles with complete resolution of all pulmonary metastasis and > 50% reduction in size of the mass in the thigh.

- E. How would you manage her now ? (40 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**AUGUST 2008**

Date : 25<sup>th</sup> August 2008

Time : 2.00 p.m. - 4.00 p.m.

**PAPER I**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. What is the use of genetic testing in the practice of Oncology. Discuss critically, the need for establishing a genetic laboratory in the state health sector in Sri Lanka.
2. What is the value of clinical audit ?  
You have just been appointed as the Director of Audit for your Oncology Department. Discuss how you would go about organizing an audit programme within the available framework of your department.
3.
  - 3.1. Name the main components of a comprehensive cancer control programme.
  - 3.2. What do you mean by primary and secondary prevention of cancer ?
  - 3.3. The breast and cervical cancers constitute nearly 40% of female cancers in Sri Lanka. What do you suggest to control this tendency. Give reasons for your answer.
4. It is estimated that on mortality/incidence ratio the 5-year survival after diagnosis of a cancer is 30% in Sri Lanka. Therefore a large proportion of cancer patients need palliative care.. Discuss the essential components for a good palliative care service in Sri Lanka.



**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**AUGUST 2009**

Date : 24<sup>th</sup> August 2009

Time : 2.00 p.m. – 4.00 p.m..

**PAPER 1**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1.
  - 1.1. Write notes on the mechanism of action of hormonal therapy in cancer. (30 marks)
  - 1.2. Write notes on the role, advantages and disadvantages of hormonal therapy in breast cancer. (70 marks)
  
2. Discuss what modern approaches are being implemented to improve the therapeutic ratio employing external beam radiotherapy. Discuss these developments in relation to head and neck and cervical cancer. (100 marks)
  
3. A 30 year old widow with 3 children had radical treatment for carcinoma of the cervix 12 months ago. She now presents with intractable sacral pain due to pelvic recurrence. There is no scope for further active treatment.  
  
Describe her on going management detailing **all** potential methods of pain control and supportive care. (100 marks)
  
4. Modern treatment guidelines detail recommended treatment for cancer. Discuss patient related factors other than those related to the malignancy itself that would determine the management of cancer patients. (100 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II (REPEAT) EXAMINATION**  
**DECEMBER 2009**

Date : 14<sup>th</sup> December 2009

Time : 2.00 p.m. - 4.00 p.m.

**PAPER I**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1.
  - 1.1. Several arguments have been put forward both for and against Cobalt Units as well as Linear accelerators. These arguments relate to physics, clinical advantages and more importantly, the cost consideration. Enumerate the differences between Cobalt Units and Linear accelerators. (40 marks)
  - 1.2. As the newly appointed Consultant Oncologist of the Eastern – Province of Sri Lanka, you have been asked to recommend the first Radiotherapy machine to a Cancer Unit. Please give your recommendations with justification for your choice of Teletherapy unit, considering the regional epidemiology of cancer and supporting services available. (60 marks)
2. List the first five common male and female cancers in Sri Lanka in the order of incidence, and describe the measures that should be advocated in future to reduce the mortality and morbidity with regard to common cancers of male and females in Sri Lanka. (100 marks)

3. High toxicity and low therapeutic index of anticancer medications make safety in their prescriptions and administration critical. As the in charge Consultant Clinical Oncologist of a peripheral cancer unit, how would you ensure safer chemotherapy practices ? (100 marks)
  
4.
  - 4.1. Mention important components of palliative care. (40 marks)
  - 4.2. Give basic outline in point form on pain management in cancer patients. (20 marks)
  - 4.3. How would you manage arm oedema in a patient with breast cancer who is in remission ? (40 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**AUGUST 2010**

Date : 23<sup>rd</sup> August 2010

Time : 2.00 p.m.-4.00 p.m.

**PAPER I**

**Answer all questions**

**Answer each question in a separate book**

**Please write legibly.**

1.
  - 1.1. What are the ethical issues concerning the consent of patients for Cancer treatment in Sri Lanka. (50 marks)
  - 1.2. What are the difficult ethical issues regarding "End of Life care" in Sri Lanka and how can it differ in other parts of the world. (50 marks)
2.
  - 2.1. Cancer treatment methods and their results show quite a difference from province to province in Sri Lanka. What are the factors that would influence such disparities ? (50 marks)
  - 2.2. What would you suggest to minimize such disparities in cancer management without compromising the country's economy. (50 marks)
3.
  - 3.1. What is the value of follow for cancer patients ? (30 marks)
  - 3.2. Explain what the benefits and economic impact may be for the patient, hospital and health economy. (40 marks)
  - 3.3. Does follow up change cause specific survival, disease free interval ? (30 marks)
4. What are the clinical constraints on dose escalation using modern technical radiotherapy with particular emphasis on late effects of radiotherapy and chemoirradiation ? (100 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II (REPEAT) EXAMINATION -**  
**DECEMBER 2010**

Date : 13<sup>th</sup> December 2010

Time : 2.00 p.m.-4.00 p.m.

**PAPER I**

**Answer all questions**

**Answer each question in a separate book**

**Please write legibly**

1. A 40 year young lady presents with carcinoma of the Cervix stage IIb.  
How would you manage this lady ?  
Describe the details of investigations and treatment modalities.  
(100 marks)
  
2. What are the mechanisms of action in hormonal therapy for cancer ?  
Describe the advantages and disadvantages of hormonal therapy in Prostate cancers.  
(100 marks)
  
3. Write notes on "Pain in Cancer"  
Describe methods of pain relief in Cancer Patients with examples.  
(100 marks)
  
4. You are appointed to the National Cancer Institute, Maharagama, as the first hemato-oncologist.  
Describe in detail the challenges that you may face while setting-up your new unit.  
What are the main strategies that you will adopt to solve such problems ?  
(100 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**AUGUST 2011**

**Date :** 22<sup>nd</sup> August 2011

**Time :** 2.00 p.m. – 4.00 p.m.

**PAPER I**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. Write short notes on the investigation, management and prognosis of cases presenting with
  - 1.1 a mobile left lower cervical lymph node with Squamous cell carcinoma.
  - 1.2 Liver metastases containing Adenocarcinoma of unknown primary origin in a 60 year old man.
2. Write short notes on the acute and late effects of radiotherapy, chemotherapy and monoclonal antibody treatments upon the cardiovascular system and methods of avoiding them.
3. Write short notes in the mechanism of action and clinical effectiveness of biological agents in the management of lung, colorectal and haematological malignancies.
4. Discuss the changes in non-surgical approaches in the management of head and neck cancers that have resulted in improvement in outcome.

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**SEPTEMBER 2012**

**Date :** 17<sup>th</sup> September 2012

**Time :** 2.00 p.m. – 4.00 p.m.

**PAPER I**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. You are requested to conduct an international multi-centre clinical trial, phase III, prospectively randomized, comparing a new molecule “A” against Rituximab in combination with standard chemotherapy, (i.e. R+CHOP) in the treatment of CD 20+ve Follicular Lymphoma.

As the Principal Investigator (PI) how would you enter your centre in to this Clinical trial ? (100 marks)

- 2.
- 2.1. Describe how you would break the bad news to a 45 years old mother of two teenage children with advanced pancreatic carcinoma. (40 marks)
- 2.2. Describe the likely difficulties while “breaking bad news” at the present set up in Sri Lanka. (60 marks)
- 3.
- 3.1. Write an essay on the use of chemotherapy in the elderly cancer patient with particular reference to the assessment, evidence for its use and the benefits and disadvantages. (40 marks)
- 3.2. An 80 year old lady presented with multiple liver metastases a year after a mastectomy for a T3N0 oestrogen receptor negative and HER 2 positive invasive duct carcinoma of the breast. She has lost a 10kg weight and feels unwell. She had a Transient Ischaemic Attack two years ago and lives on her own in a flat. Staging reveals no other evidence of disease and her blood counts and biochemistry are normal.

- 3.2.1. List the possible treatment options and their likely benefit.  
(20 marks)
- 3.2.2. Describe the advantages and disadvantages of the ones that you would consider in **this** case.  
(20 marks)
- 3.2.3. Give the reasons for the **one** that you would choose. (20 marks)
4. Describe the mechanism of action and roles of bisphosphonates in malignant disease giving the evidence for and the problems with their use.  
(100 marks)



**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**SEPTEMBER 2013**

**Date :** 16<sup>th</sup> September 2013

**Time :** 2.00 p.m. – 4.00 p.m.

**PAPER I**

**Answer all questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. “ Is this the end of radiotherapy in Early Hodgkin’s Lymphoma ?  
Discuss the background evidence for and against this statement and  
define the role of radiotherapy in all stages of Hidgkin’s Disease. (60 marks)

Outline the long term complications of all forms of treatment for  
Hodgkin’s disease and how you would screen for them. (40 marks)

2. Write an essay on the management of brain metastases in breast cancer  
explaining the risk factors, management and advantages and  
disadvantages of the treatment approaches. (100 marks)

3.
    - 3.1. What do you understand by “Personalized Cancer treatment” ?  
(10 marks)
    - 3.2. What is the basic biological concept of Genomic based Cancer Therapy ?  
(20 marks)
    - 3.3. List three (03) examples how such genomic biomarkers could help the oncologists to make treatment decisions ?  
(10 marks)
    - 3.4. What is your personal view on setting up a Centre for Genomic based cancer treatment in Sri Lanka.  
(60 marks)
  
  4.
    - 4.1. List the common Oncological Emergencies, and their management.  
(20 marks)
    - 4.2. Discuss the differential diagnosis and the management of a 66 year old man with multiple myeloma presenting with confusion and general debility a week after chemotherapy.  
(80 marks)
- /

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**SEPTEMBER 2014**

**Date :** 1<sup>st</sup> September 2014

**Time :** 2.00 p.m. – 4.00 p.m.

**PAPER I**

**Answer ALL FOUR questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1. Discuss the management of Limited stage small cell carcinoma of lung.  
Discussion should include the rationale and treatment details.  
(100 marks)
  
2. Discuss the place of radiotherapy in the management of testicular malignancies  
?Discussion should include indications, details of treatment techniques and advice  
while on radiotherapy.  
(100 marks)
  
3. Describe the advantages and disadvantages of the different treatment approaches  
for ductal carcinoma insitu of the breast giving the results and prognosis of each  
one.  
(100 marks)
  
4. Define Cancer Survivorship. Describe the role of follow up in colorectal cancer  
describing clinical strategies and the short and long term issues of survivorship  
and their treatment.  
(100 marks)

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**MD (CLINICAL ONCOLOGY) PART II EXAMINATION**  
**SEPTEMBER 2015**

**Date :** 7<sup>th</sup> September 2015

**Time :** 2.00 p.m. – 4.00 p.m.

**PAPER I**

**Answer ALL FOUR questions.**

**Answer each question in a separate book.**

**Please write legibly.**

1.

- 1.1. There is a national plan to improve the Palliative Care Service in Sri Lanka for cancer patients.

Discuss the concept of palliative care and outline the essential aspects that have to develop in a palliative care programme.

(50 marks)

- 1.2. A 50 year old widow with a locally advanced breast cancer was on second line chemotherapy treatment for extensive liver metastases. She is now very breathless at rest and has new severe back pain. She has long term cardiac failure and has travelled 80 km to her cancer centre from home. Her performance status is 2 with a 4x4 cm fixed mass in her breast but no other palpable disease. Outline her management plan.

(50 marks)

2.

- 2.1. Cancer treatment can cause fertility problems in both males and females.

Discuss the causes and how we can reduce, prevent or overcome this fertility problem related to cancer treatment.

(70 marks)

- 2.2. Outline the management of 30 year old pregnant patient in her second trimester having cervical cancer of stage Ibl.

(30 marks)

3. Write short notes on the different roles of modern radiotherapy techniques in the treatment of lung cancer. Note the indications for and the benefit of the treatments discussed. (100 marks)
  
4.
  - 4.1. Describe the basic requirements and problems in setting up, delivering and evaluating a screening programme. (70 marks)
  
  - 4.2. Detail your recommendations for the delivery of a breast screening programme giving an explanation for them. (30 marks)