

Ideal Oncology Curriculum

FOR MEDICAL SCHOOLS

Knowledge, skills and attitudes of medical students at graduation

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| | |
|--|----|
| Acknowledgments | 2 |
| Feedback | 2 |
| Foreword | 3 |
| Background | 4 |
| Introduction | 6 |
| Objectives | 7 |
| <i>Public Health</i> | |
| The role of cancer in population health and illness | 9 |
| Cancers – epidemiology and risk factors | 9 |
| Prevention, screening and family risk | 11 |
| <i>Cancer biology</i> | |
| Functional anatomy | 13 |
| Physiology | 14 |
| Pathology | 15 |
| Molecular biology | 17 |
| <i>Patient management</i> | |
| Patient management including referral and multidisciplinary management | 20 |
| Quality of life, therapeutic ratio and resource costs | 22 |
| Uncertainty and information management | 23 |
| <i>Diagnosis</i> | |
| Clinical examination | 25 |
| The diagnostic process | 27 |
| <i>Treatment</i> | |
| General principles of treatment | 29 |
| Principles of surgery | 30 |
| Principles of radiotherapy | 32 |
| Principles of systemic therapy | 34 |
| Principles of palliative care | 35 |
| Follow-up and relapse | 37 |
| <i>Communication Skills</i> | |
| Psychosocial and cultural significance of cancer | 38 |
| Communication and counselling | 40 |
| Education of patients | 42 |
| Family and community support | 43 |
| <i>Ethics</i> | |
| Ethics and professionalism | 44 |
| <i>Clinical experience</i> | |
| Five essential cancer clinical experiences | 45 |
| Appendix: Oncology Education Committee Members | 47 |

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Members of the OEC developed the core concepts of this document in April 1998, and its subsequent progress was guided by the OEC Executive. The committee undertook extensive consultation with academic, professional and consumer bodies both locally and internationally, and wishes to thank the 68 organisations and individuals whose comments and suggestions have significantly improved this curriculum.

Educational input was provided by Dr Rob Simons of The Cancer Council NSW Professional Education and Training Unit, and detailed project work was undertaken by Mr Richard Thode.

The revision of the *Ideal Oncology Curriculum* has been undertaken by members of the OEC. Without their dedication and commitment, this project would not have been possible.

Feedback

The OEC welcomes feedback on possible improvements to the *Ideal Oncology Curriculum* and its supporting documents. Please direct your comments to:

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Foreword

It has been over six years since the publication of the *Ideal Oncology Curriculum for Medical Schools* by the Oncology Education Committee (OEC) of the (then) Australian Cancer Society. The first edition has already achieved success as a guide for course designers involved in cancer curricula. The *Ideal Oncology Curriculum* has been implemented in some form in most Australian medical courses and has served as an invaluable guide to those establishing a new course. A reflection of its international relevance was its endorsement by the International Union Against Cancer (UICC), the peak global anti-cancer organisation.

The need for quality cancer education is increasing. In Australia, cancer has become the most common cause of death while at the same time, survival from cancer has increased to one of the highest rates in the world. There are more people who have been affected by cancer than ever before. All health care providers need to be equipped with up-to-date, relevant and comprehensive knowledge, as well as the skills and attitudes to address the needs of cancer patients and survivors.

Medical student education has continued to change. In response to workforce shortages, in particular in rural areas, new rural clinical schools have been introduced by many Australian universities and five new medical schools have opened, mostly in regional areas. These considerable changes pose significant challenges to students learning about cancer, not only in terms of ensuring consistency of standards across all universities, but also ensuring appropriate exposure of medical students to tertiary cancer management in rural Australia.

Ensuring adequate standards in the setting of an increasing amount of knowledge and competing priorities across the medical curriculum remain a challenge. A common exit exam could ensure that all graduating students met the minimum high standard that society expects from doctors. Until that happens the *Ideal Oncology Curriculum* can help teachers to provide a common standard of cancer education.

The *Ideal Oncology Curriculum* has been reviewed and updated to incorporate changes in knowledge and practice in cancer control. One major addition is incorporation of the *Five Essential Cancer Clinical Experiences for Medical Students*; included not only because these experiences give an invaluable insight into the patients' perspective on cancer and its treatments, but also as they ensure that cancer learning remains firmly grounded in its clinical context and maintains relevance to care of patients with cancer and their loved ones.

The *Ideal Oncology Curriculum* has the endorsement of consumers, educators, students and health care professionals. It serves as a reflection of our common commitment to continuing improvement of cancer education and through it, cancer care in Australia.

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Background

Educating medical students about cancer

By Martin HN Tattersall

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Australian medical student education is changing.¹ The procedures for medical student selection are being reformed in several medical schools and in some medical schools only graduate students are eligible for entry. Medical school curricula are also changing, with an increased use of problem-based learning and self-directed learning. These changes are a response to a vast increase in medical knowledge, and major change in patient expectations of the medical profession.

In addition, new disciplines have claimed curriculum time eg. molecular biology and genetics, organ imaging, health economics, clinical epidemiology and preventive health, and some diseases have become more important in the community such as cancer and HIV. The rise of consumer lobby groups is also beginning to impact on medical curricula and education.

In part via this mechanism, the House of Representatives Inquiry into the management of breast cancer² identified the need to improve the training of medical students: "The Committee recommends that medical schools as a matter of urgency, examine their curricula with a view to initiating courses which will enable their (under)graduates to access information about the diagnosis, management and treatment of cancer, with particular reference to breast cancer".

A survey of cancer education for Australian medical students in 1986³ resulted in the Australian Cancer Society developing guidelines for an "ideal" cancer curriculum, circulated to all Australian medical schools in 1989. The International Union Against Cancer, a non-governmental independent association of more than 290 member organisations in more than 90 countries, published a monograph on cancer education for medical students in 1994.⁴ The monograph describes global concerns about the status of medical student education about cancer and provides a series of model curricula.

A survey of cancer curricula in Australian and New Zealand medical schools was undertaken in 1997.⁵ The survey instrument was based on the 1989 curriculum recommendations of the Australian Cancer Society. The main outcome measures were the presence and composition of cancer curriculum planning and assessment groups, and the course content and clinical exposure as they relate to cancer. The survey revealed that most medical schools now have cancer-planning groups, but the range of clinical experience of cancer patients varies considerably.

The changes in teaching methods and curriculum changes at several Australian medical schools provide an opportunity to reform and enhance cancer education of medical students. The *Ideal Oncology Curriculum* should be useful to those medical schools currently revising their cancer education curriculum. The task of monitoring the impact of changes in student selection, curriculum and educational methods remains, but repeating the surveys of medical schools and graduating medical students seems logical.

The Australian Cancer Society Statement of 1988 stated: "In all Australian medical schools a compulsory course in oncology should be established, this topic should be examinable, and the presence of an appropriate course should be a requirement for an accreditation review."

It seems change has been slow and erratic. The total burden of cancer on the community and the health care professions is increasing, as is the cost per case and the overall cost. The curriculum developed by the Oncology Education Committee provides a template for improved medical student cancer education in Australia and New Zealand.

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 2. House of Representatives Standing Committee on Community Affairs. Report on the management and treatment of breast cancer in Australia. Canberra: AGPS, 1995.
 3. Tattersall MHN, Langlands AO, Simpson JS, Forbes JF. Undergraduate education about cancer: a survey in Australian Medical Schools. *Eur J Cancer* 1988; 24: 467-471.
 4. Robinson E, Sherman CD, Love RR (editors). Cancer education for undergraduate medical students: curricula from around the world. Geneva: International Union Against Cancer (UICC), 1994.
 5. Barton MB, Simons R. A survey of cancer curricula in Australian and New Zealand Medical Schools 1997. *Med J Aust* 1999; 170: 225-7.

Introduction

This revision of the *Ideal Oncology Curriculum* has been undertaken by the members of the Oncology Education Committee (OEC) of The Cancer Council of Australia.

The OEC has consulted extensively with the academic staff of all medical schools in Australia and New Zealand in order to revise the 1988 *Australian Cancer Society: Statement on undergraduate cancer education* to create a curriculum guide that aims to identify core skills and competencies in oncology that graduating medical students should possess. This update reflects changing knowledge and skill requirements.

The OEC recommends that the material that follows should appear somewhere in a medical course (not necessarily in a cancer block) to provide a core of knowledge about cancer for the medical graduate. In whatever way it may be integrated, the material will assist in providing for the introduction of patient-centred skills simultaneously with a range of technical skills.

The curriculum has been structured on the educational assumption that learning is an iterative process. As well, a patient-focus rather than the more traditional medical model has been adopted. This situates the presentation of methodological issues in the context of the need for good doctor-patient communication.

Suggested depth of knowledge for each learning objective is illustrated by representative questions indicating the minimum knowledge expected of medical students. These questions are intended as a guide to curriculum committees and are not included as possible examination questions.

The length of the entry for an individual objective is not representative of its importance to the curriculum, nor the amount of time that might be allocated for its teaching. Time allocation per objective will be at the judgement of the educational institution.

Objectives

| Area | Objective | Topic |
|-----------------------------|-----------|--|
| Public health | 1.1 | The role of cancer in population health and illness |
| | 1.2 | Cancers – epidemiology, risk factors |
| | 1.3 | Prevention, screening, and family risk |
| Cancer biology | 2.1 | Functional anatomy |
| | 2.2 | Physiology |
| | 2.3 | Pathology |
| | 2.4 | Molecular biology |
| Patient management | 3.1 | Patient management including referral and multidisciplinary management |
| | 3.2 | Quality of life, therapeutic ratio and resource costs |
| | 3.3 | Uncertainty and information management |
| Diagnosis | 4.1 | Clinical examination |
| | 4.2 | The diagnostic process |
| Treatment | 5.1 | General principles of treatment |
| | 5.2 | Principles of surgery |
| | 5.3 | Principles of radiotherapy |
| | 5.4 | Principles of systemic therapy |
| | 5.5 | Principles of palliative care |
| | 5.6 | Follow-up and relapse |
| Communication skills | 6.1 | Psychosocial and cultural significance of cancer |
| | 6.2 | Communication and counselling |
| | 6.3 | Education of patients |
| | 6.4 | Family and community support |
| Ethics | 7 | Ethics and professionalism |
| Clinical experience | 8 | Five essential cancer clinical experiences |

At graduation, the student should be able to...

Area: Public Health

Objective 1.1

The role of cancer in population health and illness

Appreciate the significance of cancer as a health problem in Australia and throughout the world.

Objective 1.2

Cancers – epidemiology and risk factors

- a) Describe the epidemiological concepts of morbidity (incidence and prevalence), mortality, relative risk and survival in relation to common cancers.
 - b) Discuss the role of statistical information, including surveillance and monitoring data, and understanding the medical practitioner's need to be able to access numerical information.
 - c) Discuss the purpose of cancer registries.
 - d) Describe risk factors for various malignancies – genetic and non-genetic.
 - e) List the most frequently diagnosed malignancies and the most common causes of cancer death in Australia; describe in a general way how these are different in different parts of the world.
 - f) Describe the differential rates of cancers and their outcome in Indigenous and non-Indigenous Australians and the reasons behind them.
 - g) Describe the differing outcomes of cancers, in general, between rural and urban populations and the reasons behind them.
- ✓ Prerequisite knowledge
 - Statistical concepts of relative and absolute values.
 - Inherited and acquired risk factors.
 - DNA structure and function.
 - Mendelian genetics.

1.2 Representative questions that suggest the required depth of knowledge

1. Describe the role of epidemiology in establishing causes of cancer and identifying risk factors for cancer. Give examples of causes of cancer and risk factors for cancer and explain the differences between them.

Essential in answer

- Concept of risk – definitions, relative v absolute risk
- Concept of causation.
- Understanding of data collection.

2. Answer, in language you would use, the question from 45 year-old Mabel Jones: "What caused my bowel cancer doctor? And what are the risks that other members of my family will get cancer?"

Essential in answer

- Knowledge of risk factors for colorectal cancers.
- Knowledge of genetics of colorectal cancers.

3. What proportion of breast cancer patients have an identifiable genetic cause?

- (a) 1%
- (b) < 5%
- (c) 5-10%
- (d) 30%

Answer: (c)

4. Which conditions are associated with an increased risk of colon cancer?

Essential in answer

- Ulcerative colitis.
- Crohn's disease.
- Familial polyposis.
- Other familial conditions including hereditary non-polyposis coli syndrome (HNPCC).
- Benign polyps of the bowel.
- Previous colon cancer.

Objective 1.3

Prevention, screening and family risk

- a) Describe methods for the primary and secondary prevention of cancer, including measures that employ a public health approach, as well as those depending on individuals and their doctors.
- b) Describe the methods of screening for cancer and pre-malignant conditions.
- c) Demonstrate an understanding of the scientific evidence for the utility of screening, the difference between population-based screening and surveillance of individuals, and cost-effectiveness issues.
- d) Discuss environmental control and behavioural and chemical approaches to the prevention of cancer.
- e) Demonstrate an understanding of the psychosocial impact of screening and staging investigations on the patient.
- f) Demonstrate ability to take family history.
- ✓ Prerequisite knowledge
- Basic epidemiological concepts including: prevalence; incidence; specificity; sensitivity; predictive value; screening v diagnosis; cost-benefit analysis; and prevention strategies.

1.3 Representative questions that suggest the required depth of knowledge

1. Elizabeth Smith, a 54 year-old long-standing patient is seeing you in a follow-up visit for a settling U.T.I. You decide it is time she had a mammogram and suggest this to her. She replies: "Why should I do that and what good would it do me?" What is your answer?

Essential in answer

- Mammographic screening of women over 50 years of age has been shown to improve survival and produce better outcomes in populations that are screened.

2. John Smith, the 54 year-old husband of Elizabeth is seeing you for a routine insurance check-up. During the course of the visit he asks you about cancer. He smokes 10 cigarettes a day, drinks "socially", is modestly overweight and has a younger brother with colorectal cancer. He then specifically asks for a PSA test, as he is worried about prostate cancer. What course of action and relevant explanations would you offer to him?

Essential in answer

- Knowledge of environmental and lifestyle risk factors.
- Knowledge of the genetics of colorectal cancer.
- Knowledge of the controversy regarding PSA screening.
- Recognition that smoking, overweight and familial risks are, on balance, more significant issues than PSA levels for this patient.

3. With respect to screening for common cancers in Australia, select the best answer:
 - (a) Mammography has been advocated in Australia for asymptomatic women aged <40 years.
 - (b) Pap smears can be discontinued when the woman ceases regular sexual activity.
 - (c) A normal result for prostate specific antigen (PSA) excludes a diagnosis of prostate cancer.
 - (d) A family history of familial adenomatous polyposis increases the probability of malignancy in an anxious 27 year-old female who reports altered bowel habit.

Answer: (d)

Area: Cancer biology

Objective 2.1

Functional Anatomy

Demonstrate an understanding of the anatomical basis of cancer assessment such as: vascular supply (eg. liver); lymphatic drainage patterns (eg. breast); and anatomical relationships of relevance to oncology (eg. pelvis).

- ✓ Prerequisite knowledge
- General anatomy.

2.1 Representative questions that suggest the required depth of knowledge

1. Describe the modes of potential spread of breast cancer in the upper outer quadrant of the left breast.

Essential in answer

- Direct extension – skin, chest wall.
- Lymphatic spread – axillary nodes, internal mammary nodes, supraclavicular nodes.
- Haematogenous spread – bone marrow, lung, liver, brain.

2. A patient has a squamous cell carcinoma of the apex of the left lung (Pancoast tumour). Describe the possible structures involved in local progression, and their effects.

Essential in answer

- Brachial plexus (lower roots; C8/T1) – pain, weakness in small muscles of hand.
- Cervical ganglion (sympathetic nerve) – Horner's Syndrome.
- Chest wall invasion – pain, mass.
- Supraclavicular extension – pain, mass.

Objective 2.2

Physiology

Describe the principles of handling of chemicals (by cells): drug metabolism, handling of carcinogens.

- ✓ Prerequisite knowledge
- Cell biology.
- Organ function.
- Normal physiology.

2.2 Representative questions that suggest the required depth of knowledge

1. What is the blood/brain barrier?
Essential in answer
 - Concept of sanctuary sites.
 - Knowledge of mechanisms of fat solubility and molecular size.
2. In a cancer patient with renal impairment, chemotherapy doses should be (select the best answer):
 - (a) Decreased.
 - (b) Increased.
 - (c) Unchanged.
 - (d) Reviewed.Answer: (d)

Objective 2.3

Pathology

- a) Describe the concept of carcinogenesis.
 - b) For the common cancers, demonstrate an understanding of microscopic and macroscopic findings, including pathological features from pre-malignant to malignant stages of cancer.
 - c) Describe patterns of spread of common cancers.
 - d) Demonstrate an understanding of the role and purpose of molecular pathology particularly the prognostic and/or predictive values of receptors and other targets.
- ✓ Prerequisite knowledge
 - Cell biology.

2.3 Representative questions that suggest the required depth of knowledge

1. Explain the patho-physiological mechanism(s) whereby a tumour may grow in lines of diverse differentiation ("tumour heterogeneity").

Essential in answer

- Knowledge of mutation/genetic instability.

2. What are the roles of Tumour Angiogenesis Factor and Tumour Necrosis Factor in neoplasia?

Essential in answer

- Knowledge of new blood vessel formation.
- Knowledge of abnormal cytokine production.

3. A 65 year-old man has been diagnosed with rectal cancer. Describe possible methods of cancer spread.

Essential in answer

- Vascular and lymphatic systems.
- Direct spread.
- Trans-coelomic spread.
- Implantation.

4. Describe how knowledge of ER PR and HER2 status in breast cancer will dictate prognosis and treatment?

Essential in answer

- Hormone responsiveness.
- Role of hormonal treatment.
- Role of Herceptin.

5. With respect to cancer spread, the most common site of extralymphatic dissemination is from (select the best answer):

- (a) Colon to lung.
- (b) Breast to contralateral breast.
- (c) Prostate to liver.
- (d) Lung to brain.

Answer: (d)

Objective 2.4

Molecular biology

- a) Demonstrate an understanding of the molecular genetics of cancer: role of proto-oncogenes; tumour suppressor genes; DNA and RNA viruses; controls of apoptosis and angiogenesis; and elements of molecular genetic techniques.
- b) Demonstrate an understanding of the molecular correlates of the pathological progression of cancer in a model system.
- c) Describe hormonal influences and tumour markers relevant to tumour type and prognosis.
- d) Identify important familial cancer syndromes and demonstrate an understanding of their molecular basis, mode of inheritance, associated risk of disease and implications for family counselling.

✓ Prerequisite knowledge

- Biochemistry.
- Functional anatomy.
- Genetics.
- Oncological physiology.
- Pathology.

2.4 Representative questions that suggest the required depth of knowledge

1. Discuss oncogenes and their normal counterparts.

Essential in answer

- Normal functions of proto-oncogenes in the mitogenic cascade.
 - Oncogenes as mutations of proto-oncogenes resulting in gain of function (dominant) characteristics.
 - Examples of classes of normal functions (growth factors, their receptors etc).
 - Examples of mutating events (point mutation, amplification, translocation etc).
2. Approximately 70% of patients with retinoblastoma have unilateral disease and 30% have bilateral or multifocal disease. Explain the mechanisms for unilateral and bilateral disease. What is the risk of recurrence in family members?

Essential in answer

- Concept of RB1 as a tumour suppressor gene.
 - Familial and sporadic cancers and the Knudson (two hit) hypothesis - in familial retinoblastoma the first hit is either inherited or a new mutation in a gamete.
 - Penetrance issues in familial cancers (bilateral disease always involves a germ-line mutation; unilateral disease may be familial so parents of an apparently sporadic case must be examined for evidence of healed retinoblastoma).
 - Familial cancers typically exhibit dominant inheritance with variable penetrance.
3. A young woman consults you because she is anxious about her family history of breast cancer. Her mother died recently aged 53 of ovarian cancer following a history of breast cancer. She had two second-degree relatives with breast cancer, an aunt who died in her 40s and another aunt who died in her early 60s. Tissue is not available from any of the deceased relatives.

What is this woman's risk of cancer? What is your management rationale and why?

Essential in answer

If the diagnoses are correct and the deceased relatives are genetically related her risk of breast and ovarian +/- colorectal cancer is high (involvement of BRCA1 or 2 possible). Referral to a clinical geneticist or familial cancer clinic is desirable. The rationale for referral is to obtain risk assessment and management strategies which would include:

- Counselling: about risk and attitudes to genetic testing and information about its limitations (currently not available in Australia without DNA from an affected family member; false negatives).
- Increased surveillance in the absence of testing or if gene mutation is detected.
- Identification of other family members at risk.

4. Relate the following investigation findings to the appropriate tumour type:

- (1) ovarian cancer
- (2) breast cancer
- (3) colorectal cancer
- (4) prostate cancer
- (5) hepatocellular cancer

- (a) CA 15.3
- (b) CA 19.9
- (c) CA 125
- (d) Prostate specific antigen (PSA)
- (e) Carcinoembryonic antigen (CEA)
- (f) Alpha fetoprotein (AFP)

Answer 1c, 2a, 3e, 4d, 5f

Area: Patient management

Objective 3.1

Patient management including referral and multidisciplinary management

- a) Demonstrate awareness of clinical practice guidelines, where available, for appropriate referral patterns - understand the need for evidence based medicine.
- b) Identify effective means of communication to enhance the clinical management of patients with cancer.
- c) Demonstrate an understanding of the need to recognise, address and manage psychological distress in the patient.
- d) Recognise the importance of coordinated care in optimising overall management of patients.
- e) Recognise their own clinical limitations and understand that help from those with better specialist knowledge can be sought.
- f) Demonstrate an ability to seek help at an appropriate level of urgency, using appropriate methods of communication, from appropriate sources.
- g) Demonstrate an attitude of accepting responsibility for ensuring continuity of care for patients over the long-term, and at all hours.
- h) Describe the integration of treatment modalities.
- i) Survey treatment options available to the patient, including a knowledge of unproven/experimental therapies, as distinct from alternative therapies.
- j) Demonstrate an understanding of the range of medical and non-medical health professionals involved in cancer care.
- k) Demonstrate an understanding of the effective use of a multidisciplinary management team.
- ✓ Prerequisite knowledge
- Basic understanding of how the health care system works.

3.1 Representative questions that suggest the required depth of knowledge

1. Write a referral letter from a general practitioner to a specialist about a patient who you suspect has a lung cancer (develop hypothetical case data). Include all the information you consider relevant for the specialist to manage the case in conjunction with the patient's GP (yourself).

Essential in answer

- History taking.
- Examination.
- Succinct communication and relevance.

2. You have referred Mrs Briggs, a 47 year-old woman, to a general surgeon who you went to university with because she has a suspicious lump in her left breast. Mrs Briggs asks you about the multidisciplinary clinic that she has read about in the National Health and Medical Research Council consumer guide. How do you respond?

Essential in answer

- Knowledge of multidisciplinary management of cancer.
- Knowledge of specialist v non-specialist management of cancer.
- Ability to review management in light of evidence.

3. Write a submission to a hospital administration justifying the establishment of a multidisciplinary breast clinic in your large teaching hospital.

Essential in answer

- Knowledge of the different disciplines that contribute to successful cancer management.
- Knowledge of models that integrate disciplines.
- Understanding of cost-benefits.

Objective 3.2

Quality of life, therapeutic ratio and resource costs

- a) Understand how quality of life is assessed.
- b) Appreciate the balance of risks and benefits of treatment as a key consideration in making treatment decisions.
- c) Demonstrate an understanding of the concepts of cost effectiveness, cost benefits and opportunity costs.
- d) Demonstrate an understanding of the principles of measurement of quality of life.
- e) Demonstrate an understanding of the concept of therapeutic ratio.
- f) Assess the effects of clinical decisions about treatment on the patient, their family and the health care system in terms of: quality of life; burden of treatment; effect on the disease process; and financial and other costs, including costs to the patient and family associated with patient location v treatment location.
- g) Incorporate measurements of quality of life in assessment of performance status.
- h) Demonstrate an awareness of supportive care networks and how to access and utilise them.

3.2 Representative questions that suggest the required depth of knowledge

1. If two cancer treatments such as surgery and radiotherapy give the same survival results for a given cancer, what other issues would you consider in advising which treatment is the better?

Essential in answer

- Knowledge of how side-effects and quality of life impact on the therapeutic ratio.
- Knowledge of costs/cost benefits/opportunity costs.

2. Discuss the common instruments used to measure quality of life.

Essential in answer

- Definition of quality of life.
- General knowledge of SF36, FL1C and the Rotterdam Symptom Checklist.

3. How does the general quality of a patient's health impact on their probability of survival when cancer is diagnosed?

Essential in answer

- Understanding of measurement of performance status.
- Understanding of impact of performance status on survival.
- Understanding of side-effects.

Objective 3.3

Uncertainty and information management

- a) Describe the importance of evidence based medical practice.
 - b) Demonstrate an understanding of the need to be able to critically appraise evidence.
 - c) Appraise information from patients and other subjective sources critically, and record in a way that allows the information to be retrieved and communicated effectively for optimal management.
 - d) Critically appraise the available information guiding the management of common cancers and be able to distinguish different levels of evidence.
 - e) Locate published high quality evidence and guidelines for practitioners and patients using electronic literature searches, both locally and from overseas.
 - f) Adapt and apply information to the management of individual cases and to the formulation of management options in the absence of definitive information (tolerating uncertainty).
 - g) Demonstrate an understanding of clinical trials and their importance; explain their value to patients and encourage patients to participate in trials.
 - h) Describe basic elements of clinical trials, cohort studies and case control studies.
 - i) Appraise studies of treatment, prevention, diagnosis, prognosis, causation and harm, systematic reviews, clinical practice guidelines and cost-effectiveness studies.
 - j) Demonstrate an understanding of the limits of evidence, its broad application and its advancement over time.
 - k) Discuss unproven or alternative/complementary cancer therapies in a way that encourages patients to appraise their claimed benefits and their costs in a critical manner.
- ✓ Prerequisite knowledge
- Basic understanding of clinical epidemiology.
 - Ability to describe and utilise clinical epidemiological terms such as sensitivity and specificity.
 - Understanding of processes of critical appraisal.
 - Ability to locate available evidence based medicine and guideline information by manual and electronic literature searches, including the internet and Cochrane Collaboration databases.
 - Ability to describe basic elements of research methods: randomised control trials; cohort and case control studies.
 - Understanding the relative value of evidence provided by such different research methods and how they are quantified.
 - Understanding the role of qualitative research findings in guiding clinical decision making.
 - Understanding the principles of evidence based medicine and levels of evidence.
 - Understanding the strengths and weaknesses of different study designs.

3.3 Representative questions that suggest the required depth of knowledge

1. Mr Cathari, a 58 year-old man with metastatic colon cancer, visits you in your general practice. He has some mild lethargy but is otherwise well. He wants advice about alternative/complementary treatments for his cancer. What do you tell him?

Essential in answer

- Concept of unproven as opposed to alternative therapy.
- Critical appraisal of cost benefits.
- Knowledge of guidelines.

2. A patient who has breast cancer comes to you with some information on breast cancer from the internet. She is very worried and has a lot of difficulty knowing what to believe. What do you tell her about retrieving useful information from the internet?

Essential in answer

- Critical appraisal.
- Knowledge of useful websites.
- Encouragement of use of well written evidence based literature in addition to web-based information.
- Awareness of other sources of information such as breast cancer support services and the Lymphoedema Association.

3. "Clinical practice guidelines are a waste of time" – discuss.

Essential in answer

- Levels of evidence.
- Variation in practice.
- Limits to knowledge.
- Accountability.
- Individualising care.

4. A randomised phase III was performed between drug X and Docetaxel as second line therapy for metastatic non-small cell lung cancer. Fifty patients were randomised to each arm and when comparing objective response rates no significant difference was found between the two arms $p>0.05$. Discuss the possible meanings of this result.

Essential in answer

The numbers may not provide sufficient power to detect a clinically meaningful difference so it is not necessarily a negative study, but an indeterminate result. Is objective response rate the best endpoint in this situation?

Area: Diagnosis

Objective 4.1

Clinical examination

- a) Discuss clinical manifestations of cancer, considering broad aspects of:
 - (i) functional anatomy (vascular supply, lymphatic drainage, oncological anatomical relationships);
 - (ii) oncological pathophysiology;
 - (iii) pathology.
 - b) Demonstrate an understanding of the components of the clinical examination of common cancers.
 - c) Demonstrate effective clinical examination relevant to common cancers.
 - d) Describe the results of clinical examination.
 - e) Accurately describe the physical signs of cancer.
- ✓ Prerequisite knowledge
 - Anatomy of common cancer sites.
 - Clinical examination framework and skills.

4.1 Representative questions that suggest the required depth of knowledge

1. What are the potential areas of spread of a breast cancer recently treated by surgery, radiotherapy and chemotherapy? How would you detect them? Is early detection of recurrence or metastasis worth while?

Essential in answer

- Knowledge of organ/local/distant cancer spread.
- Knowledge of clinical examination techniques.
- Appropriate clinical examination reasoning.

2. Select two commonly occurring cancers (eg. breast and rectal) and discuss how your examination of a patient is determined by your knowledge of the anatomical spread of those cancers? Briefly describe the clinical techniques used for each aspect of the examination of each organ or body part relevant to the examination for each cancer type.

Essential in answer

- Knowledge of organ/local/distant cancer spread.
- Knowledge of clinical examination techniques.
- Knowledge of how to self educate patients.
- Appropriate clinical examination reasoning.

3. A 55 year-old male presents with his first episode of bright bleeding per rectum. There is no past history of bowel problems. If no other personal history is forthcoming, what investigation would be most appropriate?

(a) Faecal occult blood testing x3.

(b) CEA.

(c) Colonoscopy.

Answer: (c)

Objective 4.2

The diagnostic process

- a) Demonstrate an understanding of the wide range of potential presentations of cancer, and be open to unusual presentations.
- b) Take history and conduct a physical examination, tailoring the latter to natural history and patterns of spread of common cancers.
- c) Assess performance status.
- d) Discuss the differential diagnosis of common cancers based on specific oncological findings.
- e) Describe how to establish a diagnosis of cancer: outcome overview; diagnostic tools (biopsy, surgery, cytology, imaging, endoscopy); genetic/biochemical/molecular markers.
- f) Demonstrate an understanding of the histopathological classification and staging of cancers, including the concept of TNM and the implications of staging for prognosis and treatment.
- g) Recognise common complications of malignant disease, eg. superior vena cava obstruction, spinal cord compression, bone involvement.
- h) Evaluate critically the cost effectiveness of investigations.
- ✓ Prerequisite knowledge
- Sufficient basic scientific knowledge of tumours, benign and malignant processes, the principles of 'cure' of cancer (including epidemiological concepts such as five-year survival).

4.2 Representative questions that suggest the required depth of knowledge

1. Explain performance status.

Essential in answer

- Knowledge of ECOG and Karnofsky Performance Scales and how performance status affects outcomes.

2. Describe the diagnostic process for a woman presenting with a breast lump. If malignant, what further investigations should you perform?

Essential in answer

- Physical examination, mammography, ultrasound, fine needle aspiration.
- If malignant assess pathology report and metastatic spread.

3. What is the purpose of staging tumours?

Essential in answer

- Prognosis.
- Treatment decisions.
- Comparison with other data sets.

4. A 60 year-old female smoker presents with a one month history of worsening back pain and a history of work-related back pain over 12 years. What are the potential causes and how would you establish a diagnosis?

Essential in answer

- Metastatic lung cancer.
- Non-malignant causes.
- Establish diagnosis – plain X-Ray films, bone scan, CT, biopsy.

Area: Treatment

Objective 5.1

General principles of treatment

- a) Demonstrate a recognition of the importance of the patient in the decision-making process and the influences that affect their choices.
- b) Describe the principles of treatment with intent to cure and palliate.
- c) Describe the role of multidisciplinary management of the patient.
- d) Demonstrate an understanding that tailoring of standard treatment protocols may be an appropriate component of patient focused care.
- e) Demonstrate awareness of the process and outcome measures including concepts of self audit and quality assurance to minimise deviation from best practice.
- f) Outline how the treatment of malignancies by different modalities of treatment is guided by the natural history of the malignancy and the findings of staging evaluations.
- g) Demonstrate an understanding of the unique features of the management of cancer in children and adolescents and cancer in the elderly.
- h) Demonstrate an understanding of the management of potential complications of cancer treatments eg. febrile neutropenia, mucositis, radiation skin injury.
- i) Demonstrate an understanding of the management of common oncological emergencies eg. spinal cord compression, hypercalcaemia.
- j) Demonstrate an understanding of the patho-physiology of oncology emergencies and their management eg. compressive, obstructive, coagulation and metabolic syndromes.

5.1 Representative questions that suggest the required depth of knowledge

1. List the possible causes of confusion in a patient with metastatic lung cancer.

Essential in answer

- CNS – brain metastases.
- Metabolic – hypercalcaemia, renal failure.
- Iatrogenic – drugs eg. morphine, steroids.

2. How does the therapeutic ratio change when surgery is used for the palliation of lung cancer rather than for cure?

Essential in answer

- Shorter survival prospects of patients.
- Reduced acceptability of side-effects.

Objective 5.2

Principles of surgery

- a) Describe the aims of surgical treatment of cancers and the general principles of common procedures.
 - b) Demonstrate an understanding of the range of surgical options and the ways these are affected by the integration into multi-modality care.
 - c) Recognise clinical indications for surgery of common cancers.
 - d) Evaluate the outcomes of surgery, including efficacy, short and long-term side-effects, financial costs and quality of life.
 - e) Describe the general and specific pre-operative factors that influence surgical decision-making.
 - f) Discuss the effect surgery may have on body image, including the role of reconstructive surgery.
 - g) Recognise the common complications of cancer surgery and understand their management.
 - h) Discuss interactions with other modalities of therapy, both pre and post-operatively.
- ✓ Prerequisite knowledge
 - Principles of pre-operative assessment.
 - Principles of post-operative management including pain control.
 - General complications of anaesthesia and surgery eg. deep venous thrombosis, lymphoedema, pneumonia.

5.2 Representative questions that suggest the required depth of knowledge

1. Your patient is a fit 65 year-old man with prostate cancer. You are discussing radical (not nerve sparing) prostatectomy as a treatment. What probability would you quote him of these significant side-effects occurring after surgery?

Impotence occurs:

- (a) < 5%
- (b) 20%
- (c) 50%
- (d) 80%

Answer: (d)

2. A common management of early breast cancer is wide excision. What are the aims of this treatment?

Essential in answer

- Adequate pathological margin around invasive and intraductal cancer.
- Breast conservation.
- Good cosmetic outcome.

3. Radiation treatment to the breast after wide excision of cancer reduces the local recurrence rate at five years to:

- (a) 0
- (b) 5 - 10%
- (c) 10 - 20%
- (d) 40%

Answer: (b)

4. Discuss why different surgeons may have different local recurrence rates after surgical resection of rectal cancer.

Essential in answer

- Experience.
- Training.
- Number of cases per year.
- Type of cases referred.

5. What are the long-term effects of lymph-node dissection for melanoma of the leg?

Essential in answer

- Lymphoedema.
- Infection risk.

Objective 5.3

Principles of radiotherapy

- a) Describe the principles of radiobiology.
- b) Discuss the principles of radiotherapy: loco-regional treatment with either curative or palliative intent; when administered with curative intent it might be primary therapy or adjuvant to the primary modality.
- c) Describe the salient features of delivering radiation treatment using equipment such as linear accelerators and brachytherapy machines. This should include a general description of treatment simulators, bunkers and the treatment planning departments.
- d) Describe the general features of brachytherapy treatment, including the use of different isotopes placed with a variety of techniques in various anatomic sites, most prominently for ca cervix and ca prostate.
- e) Recognise the clinical indications for radiotherapy.
- f) Evaluate the outcomes of radiotherapy including: efficacy, short and long-term side-effects, costs and quality of life.
- g) Recognise the common complications of radiotherapy and understand their management.
- h) Discuss the integration of radiotherapy with other modalities.
- i) Demonstrate an understanding of the access problems associated with radiotherapy and how this may affect patient choice.

5.3 Representative questions that suggest the required depth of knowledge

- a. List the symptoms that may effectively be palliated by radiotherapy for patients with metastatic malignant diseases.

Essential in answer

- Bone pain, and other pains, particularly neuropathic.
- Bleeding from ulcerated tumours.
- Symptoms of brain metastases.
- Symptoms of cord compression.
- Dysphagia.
- Shortness of breath due to compressive lung tumours.
- Haemoptysis.
- Compressive symptoms from tumour masses.
- Haematuria from bladder or prostate tumours.

- b. In what ways would the delivery of palliative radiotherapy for patients with metastatic disease differ from that of the delivery of radical or curative radiotherapy for patients with more localised cancer?

Essential in answer

- Fewer treatments.
- Fewer acute side-effects and fewer late side-effects.
- Less complex treatments.
- Less demanding of the patient.

- c. If a surgeon has successfully excised a carcinoma from the breast of a woman and dissected the lymph nodes out of the axilla, is there any place for postoperative radiotherapy to the breast, and if so, for what reason and for what benefit?

Essential in answer

- Yes, there is a place for postoperative radiotherapy.
- When high risk of local recurrence eg. large primary tumours, positive axillary lymph nodes, high grade of tumour, positive margin, lymphovascular invasion.
- To reduce local recurrence.
- Possibly to improve survival.

- d. A man in his early 60s has undergone a resection for a rectal carcinoma and is being recommended to undergo a postoperative course of adjuvant radiotherapy to the pelvis in conjunction with chemotherapy. What information should that patient be given in order to help him make an informed decision before he consents to the therapy proposed?

Essential in answer

- Potential benefit in terms of relative reduction and risk of local regional recurrence.
- Acute toxicity of treatment and late toxicity of treatment.
- Logistics of the details of treatment delivery, including planning on a "simulator", planning beam arrangements and brief daily treatments in a specialist radiotherapy centre on a "linear accelerator" over the course of more than a month.
- Cost to the patient.

Objective 5.4

Principles of systemic therapy

- a) Outline the principles of systemic therapy including chemotherapy, hormone and immunotherapy biological therapies (including immunomodulators, signal transduction inhibitors and monoclonal antibodies) and (prospectively) gene therapy.
- b) Recognise clinical indications for use of systemic therapy in early and advanced disease.
- c) Evaluate the outcomes of systemic therapy including efficacy, short and long-term side-effects, financial costs and quality of life.
- d) Demonstrate ability to assess response to systemic therapy both clinically and radiologically.
- e) Recognise the common complications of systemic therapy and understand their management.
- f) Demonstrate ability to manage toxicities and adverse reactions to systemic therapy eg emesis, febrile neutropenia.
- g) Discuss the integration of systemic therapy with other modalities.

5.4 Representative questions that suggest the required depth of knowledge

1. Describe some of the important toxicities associated with a course of systemic chemotherapy for lymphoma (support your answer with possible mechanisms).

Essential in answer

- Haematological (bone marrow toxicity) – \emptyset WCC (impaired immunity, risk of secondary infection), \emptyset Hb, \emptyset platelets.
- Hair loss – hair follicle synchronisation.
- Nausea and vomiting.
- Cardiomyopathy – anthracycline toxicity after certain dose levels.

2. What are the aims of systemic adjuvant therapy (treatment given after definitive surgery) in breast cancer and what are some of the recognised indications for consideration of such therapy?

Essential in answer

- Aims – to reduce risk of death or recurrence or to delay these events in women with breast cancer.
- Indications – node positive BC, large primary tumours, women considered at “high” risk of recurrence.

More detail than this would be considered of greater than required standard (ie. high-grade tumours, pre-menopausal, vascular invasion).

Objective 5.5

Principles of palliative care

- a) Demonstrate an understanding of the importance of the patient in decision making processes and the influences that affect their choices.
 - b) Explain the role and structure of palliative and supportive care in the multidisciplinary management of advanced cancer.
 - c) Explain considerations of when and how palliative care should be introduced.
 - d) Demonstrate the assessment of pain and other symptoms, including nausea, fatigue, confusion, drowsiness and cachexia.
 - e) Discuss principles of both pharmacological and non-pharmacological pain relief and the palliative management of other symptoms.
 - f) Demonstrate an understanding of "end of life" issues that confront patient, family and physician:
 - Physical effects of advanced cancer;
 - Psychosocial aspects of terminal cancer, support (religious, cultural, spiritual, existential), loss and bereavement;
 - Ethical aspects of "end of life" decision-making.
 - g) Demonstrate understanding of the Palliative Care Act(s).
 - h) Demonstrate appreciation of cultural aspects of end of life care.
 - i) Demonstrate adequate communication skills, including breaking bad news and discussion of end of life care.
 - j) Demonstrate understanding of utility of procedures to relieve symptoms eg. ascitic and pleural taps.
- ✓ Prerequisite knowledge
- History of palliative care in the health care system (1950 to present).

5.5 Representative questions that suggest the required depth of knowledge

1. Discuss who would be appropriate members of a palliative care team at an acute hospital.

Essential in answer

Palliative care doctor (liaison with hospice), palliative care nurse, social worker, psychiatrist, oncologist, nursing liaison (community liaison), pastoral care worker.

Mention should be made of the multi-disciplinary nature of care.

2. During regular use of morphine for chronic pain control, what is the oral equivalent to 10mg of subcutaneous morphine sulphate?

(a) 60mg?

(b) 30mg?

(c) 10mg?

(d) 3.3mg?

Answer: (b)

The answer requires an understanding that oral morphine has only about one third of the bioavailability of parenteral morphine when used regularly ie. three times the dose is required. The required oral dose for a one-off dose is six times.

Objective 5.6

Follow-up and relapse

- a) Demonstrate an understanding of the aims of follow-up including:
 - (i) recognition and management of local and distant recurrence;
 - (ii) complications of treatment;
 - (iii) detection of new primaries.
- b) Describe manifestations of recurrence of common cancers.
- c) Describe the management of recurrences, including aims, treatments and outcomes.
- d) Demonstrate an understanding of the psychosocial impact of expected and unexpected recurrences.
- e) Demonstrate an understanding of the limitations and cost effectiveness of follow-up itself.
- f) Recognise recurrence patterns of common cancers.

5.6 Representative questions that suggest the required depth of knowledge

1. For which cancers are there effective salvage treatment for recurrent disease that offers a >25% chance of cure? (select the best answer/s, more than one may be correct)
 - (a) Hodgkin's disease.
 - (b) Rectal cancer.
 - (c) Breast cancer initially treated by lumpectomy and radiotherapy.
 - (d) Lung cancer.
 - (e) Glioblastoma multiforme.

Answer: (a and c)

2. What would you tell a patient about the purpose and limitations of follow-up after conservative treatment of colon cancer?

Essential in answer

- To detect manageable recurrence.
- To document treatment-related toxicity.
- To establish outcomes including but not exclusively survival.
- Recognition of non-clinical incentives that may drive the desire for follow-up (financial, medico-legal, patient related).

Area: Communication skills

Objective 6.1

Psychosocial and cultural significance of cancer

- a) Discuss cultural and psychosocial factors influencing presentation for screening and diagnosis.
 - b) Discuss the psychosocial impact of cancer diagnosis and treatment on the patient and their family, and how they adjust in the short and long-term.
 - c) Discuss the economic impact of cancer on the patient and family.
 - d) Demonstrate an understanding of the impact of cancer on sexuality and fertility.
 - e) Be aware of significant cultural and religious differences in the population that frame the challenge of breaking of bad news effectively.
 - f) Demonstrate understanding of resources offering appropriate and reliable patient support information.
 - g) Demonstrate ability to assess the psychosocial state.
 - h) Demonstrate awareness of significant cultural and spiritual (rather than religious) differences within the society.
- ✓ Prerequisite knowledge
 - Understanding of the doctor-patient relationship.
 - Patient-centred communication skills.

6.1 Representative questions that suggest the required depth of knowledge

1. Why is it important to have a carer present when you convey news about cancer?

Essential in answer

- Retention of information is incomplete.
- Communication should involve a number of formats at a number of different times, ideally to the patient as well as a number of different support people.

2. Discuss different cultural attitudes to death and dying.

Essential in answer

- Knowledge of the “western” society model v Indigenous v Asian etc.
- Part of continuum v major event.

3. Discuss the importance of body image in breast cancer management.

Essential in answer

- Mastectomy v conservation v reconstruction.
- Overall cosmetic outcome.
- Effects on sexuality.
- Effects of premature menopause caused by chemotherapy.

4. What are the two major side-effects which should be discussed with a man who is about to undergo radical surgery for prostate cancer and how would you discuss their management.

Essential in answer

- Impotence and incontinence. In the management of impotence, pharmacological and mechanical treatments can be discussed and counselling for the man and his partner may be necessary.

Objective 6.2

Communication and counselling

- a) Illustrate an ability to communicate the bad news of a diagnosis of cancer to a patient, their family and “significant others” in a sensitive manner, addressing concerns, fears and expectations, while making sure a realistic prognosis is explained and ensuring that appropriate confidentiality is observed.
 - b) Be aware that the impact of receiving bad news interferes with patients’ ability to comprehend fully the important information being presented to them. Illustrate the ability to assess a patient’s realistic understanding of their situation and to individually tailor verbal and written information provided according to patient preferences and understanding.
 - c) Provide supportive counselling for the patient and carers, both personally and by referral to expert help.
 - d) Demonstrate an understanding of how to explain the risks and benefits of options for management to the patient and their significant others, so that active participation in the management process is encouraged.
 - e) Facilitate informed consent for participation in clinical trials.
- ✓ Prerequisite knowledge
- Basic counselling and communication skills, including eliciting the patient’s agenda in relation to the doctor’s agenda; being able to listen.
 - Patient-centred counselling skills, including the importance of appropriate location and the amount of time devoted to the task.
 - Knowledge of the process of grief and loss.
 - Knowledge of support groups (physical and internet).

6.2 Representative questions that suggest the required depth of knowledge

1. At the consultation in which you must tell a patient a diagnosis of cancer (select the best answer/s):
- (a) The most important thing is to cover all important aspects of management and prognosis in the initial interview, to give a comprehensive statement about the patient's condition.
 - (b) Due to the need for confidentiality, the information is best given to the patient on his/her own.
 - (c) Patient autonomy dictates that all management options should be presented immediately to achieve informed consent.
 - (d) Most details of the discussion will be lost once the patient hears the diagnosis and will need repetition at a later date.

Answer: (d)

2. In patients who require an interpreter to fully understand and contribute to discussions about cancer management (select the most appropriate answer/s):
- (a) A family member is always best at interpreting medical language and transmitting information.
 - (b) An external interpreter is usually more impartial and transmits information more consistently.
 - (c) Written material (in the patient's native language) is often very helpful to aid understanding.
 - (d) Family members and friends interpreting for the patient may filter (remove parts of) medical information told to them by the treating doctor.

Answer: (b, c and d)

Objective 6.3

Education of patients

- a) Demonstrate an understanding of the principles of educating patients to be actively involved in their care.
 - b) Demonstrate an understanding of resources available to patients and the public (eg. Cancer Councils, cancer support groups, books, brochures, internet, Medline, search engines, clinical alerts, databases, chatlines, commercial helpdesks, media, family, friends etc) and the limitations of these (ie. peer reviewed journals vs popular press).
 - c) Discuss the doctor's role in patient education about self-examination and worrying signs.
 - d) Promote preventive medicine and appropriate early detection practices and encourage patients to educate others about these aspects.
 - e) Develop a partnership approach to cancer care and information acquisition (eg. willingness to learn from all sources including patients).
 - f) Demonstrate an understanding of the benefits to ongoing patient education and care that result from utilising a multidisciplinary team including health professionals and others.
 - g) Demonstrate ability to provide patient education relating to general effects of cancer treatment (symptom management and recognition of symptoms that require medical review).
- ✓ Prerequisite knowledge
 - Information technology skills.
 - Introduction to screening of populations and case-finding in individuals.
 - Patient-centred communication skills.

6.3 Representative questions that suggest the required depth of knowledge

1. Briefly outline how you would educate a patient concerning the six most common cancers (in Australia or New Zealand) supposing he/she had recently been diagnosed with each type of cancer. Describe the types of resources available to patients giving some examples of the strengths and weaknesses of each. Given that a metachronous second primary cancer is not uncommon (7-10% lifetime risk), demonstrate your ability to educate a patient on preventive measures and screening methods.

Essential in answer

- Knowledge of the most common types of cancer in Australia (or NZ).
- Knowledge of what resources exist.
- Knowledge of benefits/limitations of resources.
- Knowledge of preventive health care and screening.
- Demonstration of a partnership approach to patient care.

Objective 6.4

Family and community support

- a) Discuss the role of psychosocial, physical, financial and information supports available for patients and their families.
- b) Identify available information resources, community resources, financial resources and other physical supports.
- c) Demonstrate an understanding of the means by which doctors can facilitate the provision of these services.
- d) Identify the impact on the family of a shift to home care.
- ✓ Prerequisite knowledge
- Understanding of physical and psychosocial issues and the importance of personal support for the person with chronic ill health.

6.4 Representative questions that suggest the required depth of knowledge

What are the available community supports for patients with cancer, and their families?

Essential in answer

- Treating doctor (surgeon, radiation or medical oncologist, haematologist), local doctor, domiciliary nursing.
- Cancer Councils (literature, education programs, phone-in support).
- Home care programs (hospice associated; hospital in the home – for home treatment) and specific support groups (eg. brain tumours, Laryngectomee Associations, CanTeen).
- Isolated patient transit schemes, pastoral care and bereavement services.

Area: Ethics

Objective 7

Ethics and professionalism

- a) Demonstrate an understanding of the effects on health professionals of caring for patients with cancer and of the ways in which the stresses of this work can be managed appropriately.
 - b) Discuss the bioethics of issues such as access, equity and resource allocation, as well as medical care at the end of life.
 - c) Identify the key medico-legal issues in diagnosis, screening/early detection, management, evidence-based guidelines, defensive medicine, commutative justice, distributive justice, social justice, physician-assisted suicide, euthanasia.
 - d) Discuss principles, elements and role of informed consent in patient decision making.
- ✓ Prerequisite knowledge
- Understanding of broad medico-legal principles, patient consent, autonomy and privacy.

7 Representative questions that suggest the required depth of knowledge

1. You are a GP in a five-doctor practice. A colleague is chronically unwell and a number of patient complaints have called into question his competence. What do you need to consider in resolving this problem?

Essential in answer

- Direct approach to colleague.
- Medical defence aspects.
- "Sick doctor" counselling.
- Defining clear outcomes-based plan.

2. Why is eliciting a patient's agreement to proceed with cancer treatment a complex problem?

Essential in answer

- Differences in knowledge base.
- Language:
 - English as a second language, or inability to understand English at all;
 - Lay usage v medical jargon.
- Necessity to allocate sufficient time.
- Repeat visits.
- Oral v written v tape/video.
- Problems in defining risk - benefit and probability of benefit.

Area: Clinical experience

Objective 8

Clinical experience

Many important clinical skills must be learnt by experience. The five cancer clinical experiences that medical students need before they graduate include:

- a) Talking with and examining people affected by all stages of cancer.
- b) Talking with and examining people affected by all common cancers.
- c) Observing all components of multidisciplinary cancer care.
- d) Seeing shared decision-making between people with cancer and their doctors.
- e) Talking with and examining dying people.

Definitions

- Examine – experienced the salient features (eg. seen, felt).
- Talk with – discuss symptoms, effects, plans and reflections.
- All stages of cancer – early, locally advanced, locally recurrent and advanced.
- All common cancers – breast, prostate, lung, colorectal, melanoma, gynaecologic, lymphoma and leukaemia.
- All components of multidisciplinary cancer care – includes people preparing for, undergoing and having had cancer surgery, chemotherapy, radiation therapy, palliative care and other supportive care.

APPENDIX

ONCOLOGY EDUCATION COMMITTEE MEMBERS

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Dr Chris Atkinson

A/Prof Michael Barton

Prof Pam Bell

A/Prof David Christie

A/Prof Brendon Coventry

Dr Joanna Dewar

Prof Michael Findlay

Dr Jeremy Millar

Prof Ian Olver

Prof Peter Ravenscroft

Dr Susan Russell

Dr Sabe Sabesan

Prof Max Schwarz

Mr Darren Starmer

A/Prof Martin Stockler

Prof Martin Tattersall

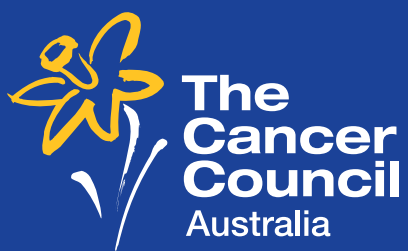
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