



Clinical Oncology training in Malaysia

Anita Bustam MBBCh(Wales), FRCR(UK)
Clinical Oncology, Faculty of Medicine,
University of Malaya, Kuala Lumpur
(On behalf of MOS)

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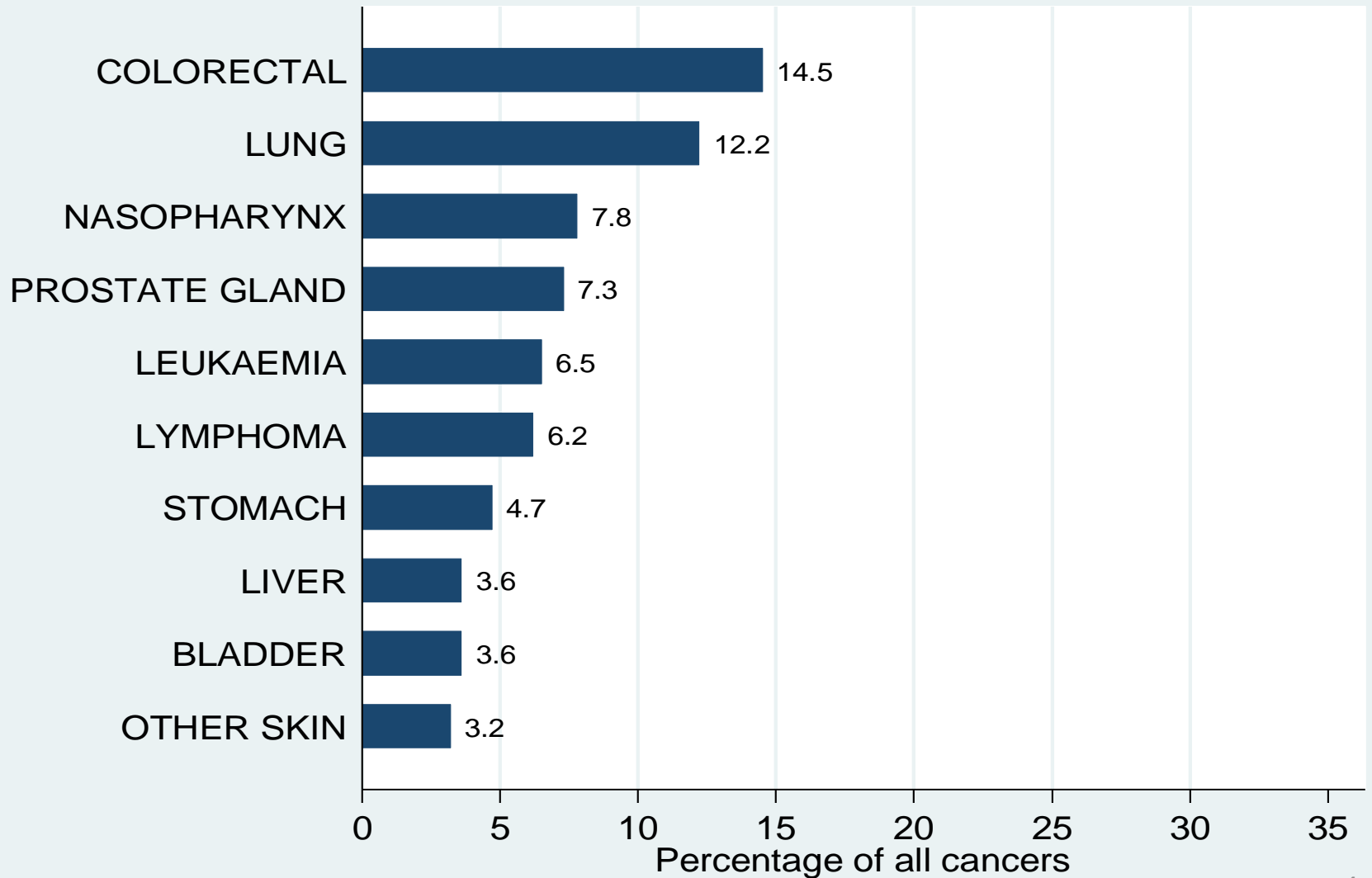
Country area: 330 803 sq km

Population (2010): 28 401 017

Cancer Statistics

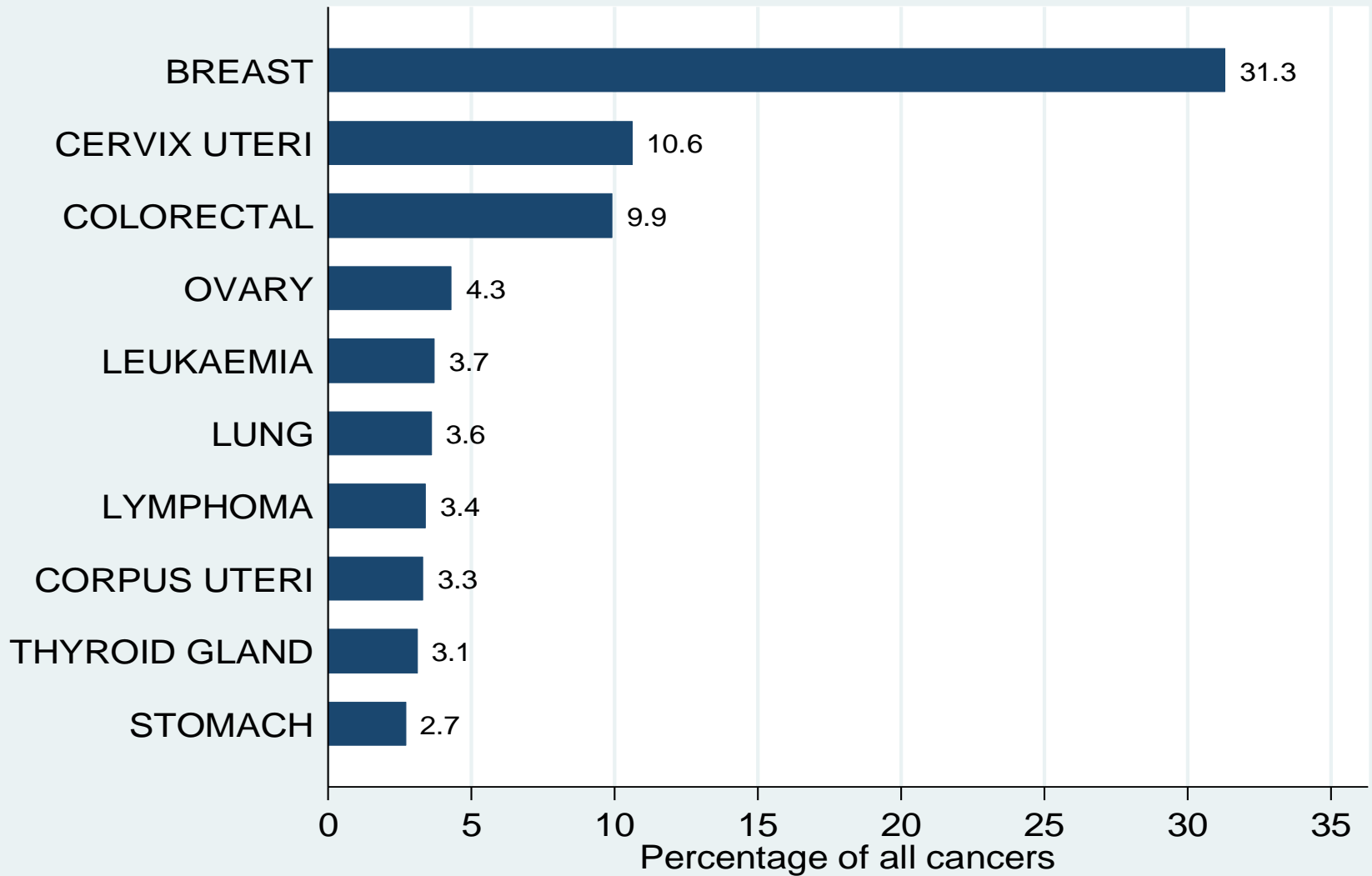
- Cancer is currently number **2** cause of death (non-communicable disease) in Malaysia
- 2014 - cancer contributed to **15%** of all deaths
- Cancer incidence : **150 for every 100,000 population.**
- Estimated no. new cases: **35-40,000** per year

Most common cancers in males Peninsular Malaysia 2003-2005



Most common cancers in females

Peninsular Malaysia 2003-2005





No. of cancer centres = 30

Public = 10 (7 Ministry of Health; 3 Universities)

Private = 20

Cancer services

- Prevention – vaccination, antismoking campaign
- Early detection – screening for cervical, breast, oral cancers
- Diagnosis – pathology, laboratory, imaging
- Treatment – surgery, radiotherapy, chemotherapy
- Rehabilitation – physiotherapy, occupational therapy, prosthesis, speech therapy, dietetics etc.
- Palliative care
- Psycho-oncology
- Social support

Issues

- Accessibility : cancer services heavily concentrated in Klang Valley area
- Cost to patients : more private hospitals than public
- **Manpower** : all categories: oncologists, nurses, physicists and technologists
- Expertise : specialised techniques eg. IMRT/IGRT, implants, stereotactic
- Cost to government : machine replacement, new centres



1st Malaysian oncologist



- Late Dr. Dharmalingam (1929-2006).
- Trained in Singapore and England.
- Pioneered cancer services including radiotherapy in Malaysia in 1960s.
- HOD Radiotherapy & Oncology, Hospital Kuala Lumpur from 1962-1982.

Towards late 20th century

- 1985 - Dept of Radiotherapy & Oncology, Sarawak General Hospital was officiated.
- 1997 - new radiotherapy/oncology depts in 3 university-based hospitals.
- 20+ clinical oncologists in Malaysia – initial training in HKL and advance training in various cancer centres in the UK.
- About 7-8 were undergoing training in the UK.

The new millenium

- 2000 - only 30 oncologists (10 public; 20 private).
- 2002 - Hospital Sultan Ismail, Johor Bharu (southern Peninsular).
- 2007 - Likas Hospital, Sabah (East Malaysia); last batch of trainees sent to the UK.
- 2013 - National Cancer Institute, Kuala Lumpur
- 2015 - 82 oncologists (33 public vs 49 private); including 26 oncologists from local training programme.



Master of Clinical Oncology (MCO)

Faculty of Medicine, University of Malaya

- First intake November 2002
- The only structured programme in Malaysia to train clinical oncologists
- A four year university-based structured training programme for a Master of Clinical Oncology degree
- Aim: To produce well-trained and competent clinical oncologists in all aspect of management of malignant diseases with emphasis on radiotherapy and systemic anticancer therapies
- Syllabus adapted from Royal College of Radiologists (UK) training for Clinical Oncology. Modified to suit Malaysian context.

Why clinical oncology?

- Due to resource constraints and the need for versatility, a clinical oncology (mixture of medical and radiation oncology) programme was developed in Malaysia.
- Moreover, most curative settings employ the use of sequential / concurrent chemoradiation \pm targeted agents and sound knowledge in both modalities is seen to be advantageous.

Entry requirements

- (a) The degrees of Bachelor of Medicine and Bachelor of Surgery approved by the Senate;
- (b) At least 2 years of post-housemanship clinical experience approved by the Senate out of which at least 1 year* must have been spent in one or more of the following disciplines:
- Internal medicine
 - Any surgical specialty
 - Obstetrics & Gynaecology
 - Paediatrics
- (c) Qualifies for registration as a medical practitioner under the Medical Act 1971 (Act 50) of Malaysia; and
- (d) Satisfies the Department responsible for the candidate's programme of study in an Entrance Evaluation recognised by the Faculty.

PROGRAMME LEARNING OUTCOMES (CORE COMPETENCIES)

PO	Domain	Learning outcome	Taxonomy
PO1	KNOWLEDGE	Master the basic science and principles of oncology management, and possess detailed knowledge of various treatment modalities in cancer.	C
PO2	PSYCHOMOTOR/PRACTICAL/ TECHNICAL SKILLS	Competent in radiotherapy planning, prescribing of systemic anticancer therapy and other related procedures.	P
PO3	SOCIAL SKILLS & RESPONSIBILITY	Acquire knowledge and skills in early cancer detection and prevention in the community and develop knowledge through cancer research and education.	C
PO4	PROFESSIONALISM, VALUES, ATTITUDES AND ETHICS	Apply the values of professionalism and ethics medicine and research.	A
PO5	COMMUNICATION SKILLS, LEADERSHIP AND TEAM WORK	Able to take the lead on patient management plan through teamwork and effective communication.	A
PO6	CRITICAL THINKING & SCIENTIFIC APPROACH	Able to apply critical and scientific problem solving skills in handling patients and research.	P
PO7	LIFE LONG LEARNING & INFORMATION MANAGEMENT	Able to utilize relevant clinical information in order to <u>practise</u> evidence-based medicine through active participation in continuous medical education and research.	P

MASTER OF CLINICAL ONCOLOGY

CORE COMPONENTS (SYLLABUS)

BASIC SCIENCES	CLINICAL	RESEARCH
<p>Basic Sciences Subjects</p> <ul style="list-style-type: none"> •Radiotherapy Physics •Pathology •Radiobiology •Molecular Biology •Pharmacology •Medical Statistics <p>Part I Examination</p> <p>Continuous assessment</p>	<p>Clinical teaching</p> <ul style="list-style-type: none"> •Management of various tumour sites <p>Clinical training</p> <ul style="list-style-type: none"> •Clinics •Radiotherapy procedures •Systemic therapy •Ward •On-calls <p>Part II Examination</p> <p>Continuous Assessment</p>	<p>Conducted during the programme under supervision.</p> <ul style="list-style-type: none"> •Research methodology •Good Clinical Practice •Statistical analysis •Scientific writing <p>Submission of thesis or publication</p> <p>Final Examination</p> <ul style="list-style-type: none"> •Research report (thesis) •Log Book Assessment

Master of Clinical Oncology - Curriculum Structure Overview

Year 1		Year 2	Year 3		Year 4
Radiotherapy Physics	Part 1 Examination		Clinical Teaching	Part 2 Examination	Final Examination
Medical Statistics					
Molecular Biology					
Pathology					
Pharmacology					
Radiobiology					
Clinical Training			Clinical Training		
	Research Project				
Continuous Assessment					

Examination/assessment

Examination	Year	Subjects	Components		Marks
Part 1 Examination	Year 1	Radiotherapy Physics	Written	Short Answer Questions	100
				MCQ	100
			Viva Voce		100
		Medical Statistics	Written	Short Answer Questions	100
				MCQ	100
			Viva Voce		100
		Molecular Biology	Written	Short Answer Questions	100
				MCQ	100
			Viva Voce		100
		Pathology	Written	Short Answer Questions	100
				MCQ	100
			Viva Voce		100
		Pharmacology	Written	Short Answer Questions	100
				MCQ	100
			Viva Voce		100
Radiobiology	Written	Short Answer Questions	100		
		MCQ	100		
	Viva Voce		100		
Part 2 Examination	Year 3		Written	Case Orientated Questions	100
				MCQ	100
			Clinical		100
			Viva Voce		100
Final Examination	Year 4		Research report		100
			Log book continuous assessment		100



- MCO (UM)
- Minimum 6 months gazette period under the supervision of a senior oncologist
- Clinical specialist / consultant clinical oncologist

Challenges

- Difficulty in retaining oncologists in the public hospitals
- Difficulty in recruiting teaching staff
- Difficulty in ensuring an up-to-date curriculum while maintaining relevance in the local context

More and more challenges over the years.
We will bravely face them. As the saying goes:
We will jump down from the Kiyamizu temple.
We have nothing to lose!



Go seicho arigatogozaimashita

