

[Indonesia]

Current Management in Malignant Diseases

Prijo SIDIPRATOMO*¹

Historically

The first major effort aimed at cancer control in Indonesia was initiated by the Dutch Colonial Government in the early 1920s.

The first organization for cancer control which coordinated the activities for research and prevention was established in Bandung in 1933, called the 'Nederlands Indische Kanker Institute,' which was closed during the Japanese occupation between 1942 and 1945, after independence of the Republic of Indonesia, the first Indonesian Foundation for Cancer Control was established in 1962 in Jakarta.

This was followed by several Cancer Foundations in several cities such as Surabaya, Solo, Yogyakarta and Bandung.

The Coordinating Foundation of all these cancer societies was then established in Jakarta on April 17, 1977, named the Indonesian Cancer Society. Research Institutions have also been established such as the National Cancer Research Institute in Jakarta in 1965, under the supervision of the Department of National Research, which was closed in 1966.

In 1974, a Research Center for Cancer and Radiology was established under the National Health Research Institute of the Ministry of Health.

In 1989, the Ministry of Health established a National Committee for Cancer Control which was meant to plan a comprehensive Cancer Control Program in terms of: prevention, early detection, early diagnostic, prompt treatment, follow-up, rehabilitation, cancer registration and cancer research.

In 1993, a new comprehensive Cancer Center Hospital was established in Jakarta which is also affiliated to the Medical Faculty University of Indonesia for the purpose of teaching and training for medical postgraduates and also for research on basic oncology.

At Present

It is currently estimated that there will be at least 170–190 new cancer cases annually for each 100,000 people and therefore cancer has risen to become sixth in rank among deaths after infectious diseases, cardiovascular diseases, traffic accidents, nutritional deficiency and congenital diseases.

However, most cancer patients (60–70%) seek medical treatment when it is already too late.

Presently the various modalities of therapy for cancer which are used in Indonesia are in the following proportions:

radiotherapy 70%, surgery 20–25% and chemotherapy 5–10%

A multi-disciplinary approach, which is the key to successful cancer treatment, can only be found at the state university hospitals and has not been adopted in most municipal hospitals.

Cancer surgery is practiced in all state university hospitals.

Medical oncology divisions have so far started in only nine state university hospitals. Pathology and cytology facilities are well organized in most of the state university hospitals.

The Indonesian Association of Oncologists (Perhimpunan Onkologi Indonesia, or POI).

Founded in 1987, POI is a subset of the Indonesian Association of Medical Doctors (Ikatan Dokter Indonesia, or IDI).

There are only 932 oncologists in Indonesia: 275 pathologists, 93 surgical oncologists, 48 gynecologic oncologists, 204 urologists, 138 digestive surgeons, 50 ENT/head-neck surgeons, 70 medical oncologists, 41 radiation oncologists and 11 specialists in palliative medicine.

Non Communicable Diseases the Most Causal of Mortality Rate in Indonesia

Its consist of Stroke, hypertension, diabetic, cancer

*1 President, Indonesian Medical Association, Jakarta, Indonesia (oetama@rad.net.id).

This article is based on a presentation made at the Symposium "Current Management of Malignant Diseases in the Asian and Oceania Regions" held at the 48th CMAAO Mid-term Council, Macau, China, on November 10, 2012.

and chronic diseases of the lung.

Statistic from ministry of health reported that died due to non communicable diseases is increased from 41.7% in the year 1995, 49.9% in the year 2001 and 59.5% in the year 2007.

The most causal of death is stroke (15.4%), hypertension, Diabetic, cancer, obstructive diseases of the Lung.

Radiation Treatment Facilities

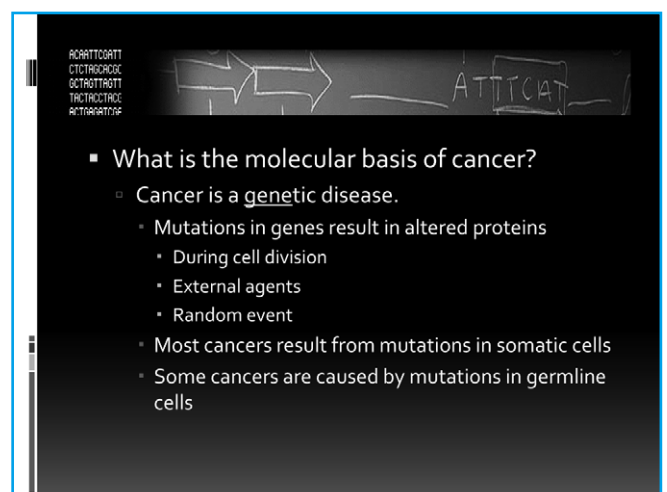
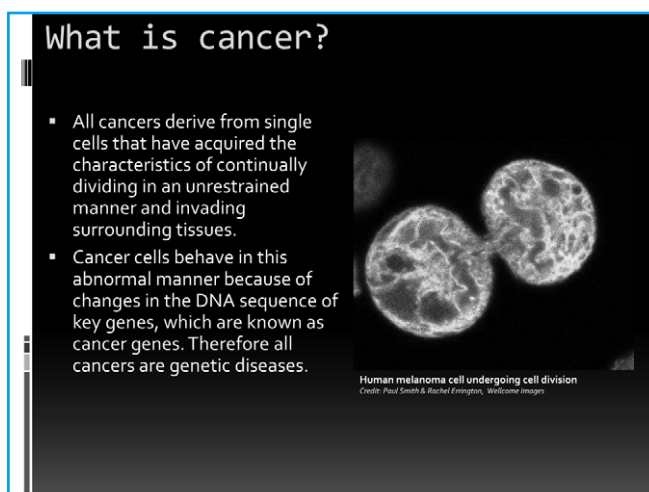
In 2008, there were 22 radiotherapy centres in Indonesia, 18 Linear Accelerators and 17 cobalt units.

There were 270 radiation oncology professionals, including 41 radiation oncologists, 38 medical physicists, 6 dosimetrists, 125 radiation therapy technologists, and 60 nurses. In addition, there were 17 residents and trainees participating in the Radiation Oncology training program.

Summary

Cancer become more prevalent in Indonesia, multimodality treatment is already available and in most cases came at late stage.

Screening program is needed.

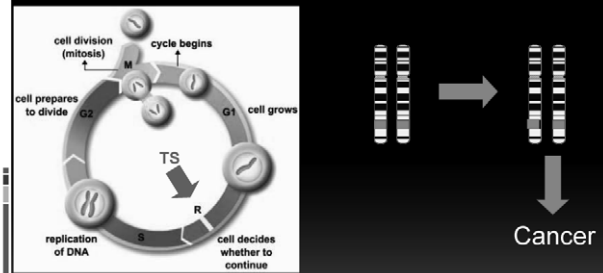


Cancer genes

- There are two types of cancer genes:
 - Tumour suppressor genes
 - Oncogenes
- To date, we know of approximately 400 somatic "cancer genes" * but there are almost certainly more to be found
- COSMIC is a catalogue of somatic mutations found in cancer genes in human tumours and is available at: <http://www.sanger.ac.uk/genetics/CGP/cosmic/>

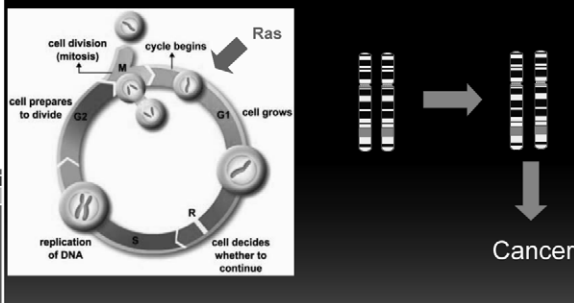
Tumour suppressor gene

These genes normally function to PREVENT cell growth/division

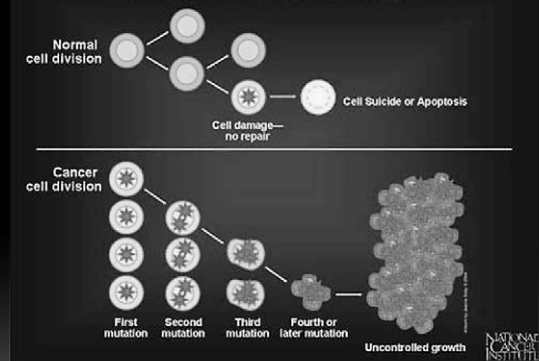


Oncogene

Genes which normally function to PROMOTE cell growth/division in a controlled manner



Loss of Normal Growth Control



Historically

- the first major effort aimed at cancer control in Indonesia was initiated by the Dutch Colonial Government in the early 1920s.
- The first organization for cancer control which coordinated the activities for research and prevention was established in Bandung in 1933, called the 'Nederlands Indische Kanker Institute', which was closed during the Japanese occupation between 1942 and 1945

Tjindarbumi D, *Jpn. J. Clin. Oncol.* (2002) 32 (Suppl 1): S17-S21

- After independence of the Republic of Indonesia, the first Indonesian Foundation for Cancer Control was established in 1962 in Jakarta.
- This was followed by several Cancer Foundations in several cities such as Surabaya, Solo, Yogyakarta and Bandung.
- The Coordinating Foundation of all these cancer societies was then established in Jakarta on April 17, 1977, named the Indonesian Cancer Society

Tjindarbumi D, *Jpn. J. Clin. Oncol.* (2002) 32 (suppl 1): S17-S21

- Research Institutions have also been established such as the National Cancer Research Institute in Jakarta in 1965, under the supervision of the Department of National Research, which was closed in 1966.
- In 1974, a Research Center for Cancer and Radiology was established under the National Health Research Institute of the Ministry of Health.

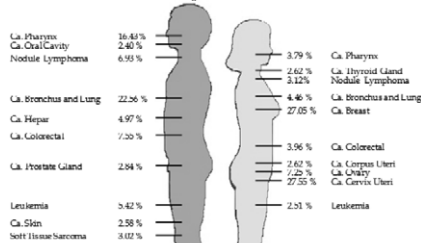
Tjindarbumi D, *Jpn. J. Clin. Oncol.* (2002) 32 (suppl 1): S17-S21

- In 1989, the Ministry of Health established a National Committee for Cancer Control which was meant to plan a comprehensive Cancer Control Program in terms of:
 - prevention
 - early detection
 - early diagnostic
 - prompt treatment
 - follow-up
 - rehabilitation
 - cancer registration
 - cancer research

- In 1993, a new comprehensive Cancer Center Hospital was established in Jakarta which is also affiliated to the Medical Faculty University of Indonesia for the purpose of teaching and training for medical postgraduates and also for research on basic oncology.
- It is currently estimated that there will be at least 170–190 new cancer cases annually for each 100 000 people and therefore cancer has risen to become sixth in rank among deaths after infectious diseases, cardiovascular diseases, traffic accidents, nutritional deficiency and congenital diseases.
- However, most cancer patients (60–70%) seek medical treatment when it is already too late

Tjindarbumi D, *Jpn. J. Clin. Oncol.* (2002) 32 (suppl 1): S17-S21.

The Most Common Malignancy in Male and Female
Dharmas National Cancer Hospital, Jakarta-Indonesia in 1997-1999



Sub Division Cancer Registry
Research and Development
Department
Dharmas National Cancer
Hospital, Jakarta, Indonesia
Data unpublished

The Most Common Mortality in Male and Female
Dharmas National Cancer Hospital, Jakarta-Indonesia in 1997-1999



Sub Division Cancer Registry
Research and Development
Department
Dharmas National Cancer Hospital,
Jakarta, Indonesia
Data unpublished

At present the various modalities of therapy for cancer which are used in Indonesia are in the following proportions:

- radiotherapy 70%
- surgery 20–25%
- chemotherapy 5–10%

- A multi-disciplinary approach, which is the key to successful cancer treatment, can only be found at the state university hospitals and has not been adopted in most municipal hospitals.
- Cancer surgery is practiced in all state university hospitals.

Surgery



- Medical oncology divisions have so far started in only nine state university hospitals.
- Pathology and cytology facilities are well organized in most of the state university hospitals

SEMINAR
**PERKEMBANGAN
DIAGNOSTIK &
TATA LAKSANA KANKER**

RS. KANKER DHARMAIS
6-7 NOVEMBER 2012

**AKREDITASI
(IDI)**

Jl. Letjend S. Perman kav 84-88
Slipi - Jakarta Barat 11420
Telp : 021-5681576
fax : 021-5681572/5681579

KATA PENGANTAR

Penyakit tidak menular diantaranya kanker merupakan penyakit yang mengancam kematian di Asia Tenggara dan Dunia. Dalam pertemuan WHO SEARO pada awal September 2012 (Kompas, Sabtu 8-9-2012) dinyatakan bahwa penyakit tidak menular menjadi pembunuh utama di Asia Tenggara, sehingga diperlukan kerjasama lintas sektoral dalam penanggulangannya.

Program penanggulangan kanker nasional telah dicanangkan oleh Kementerian Kesehatan sejak tahun 2010, merupakan program yang terintegrasi dari deteksi dini, diagnosis, tata laksana hingga paliatif. Dalam program tersebut berperan serta pula lembaga swadaya masyarakat yang mengkoordinasikan kegiatannya di bidang kanker. Oleh karena itu RS Kanker Dharmais / Pusat Kanker Nasional dalam HITF ke-19 ini memusatkan program yang telah dicanangkan oleh Kementerian Kesehatan dalam bentuk pemaparan hasil program dan kegiatan yang telah dilaksanakan oleh institusi ini.

RS Kanker Dharmais sebagai pusat rujukan kanker nasional akan menyampaikan kemajuan yang telah dicapai serta menyoalasikan kegiatan kedepan pada tenaga medis, sebagai bentuk tanggung jawab institusi ini dalam mendukung penanggulangan kanker di Indonesia. Hal ini dimaksud dengan penyelenggaraan Seminar Diagnostik dan Tata laksana Kanker pada tgl. 6-7 November 2012.

Besar harapan kami dengan sosialisasi perkembangan diagnosis dan tata laksana kanker dapat memberikan kontribusi dalam memuat teknologi terkini sesuai dengan profesinya.

Ketua Panitia
dr. Walita Gustama, SpB (K) Onk

- the Indonesian Association of Oncologists (Perhimpunan Onkologi Indonesia, or POI).
- Founded in 1987, POI is a subset of the Indonesian Association of Medical Doctors (Ikatan Dokter Indonesia, or IDI).
- There are only 932 oncologists in Indonesia
- 275 pathologists, 93 surgical oncologists, 48 gynecologic oncologists, 204 urologists, 138 digestive surgeons, 50 ENT/head-neck surgeons, 70 medical oncologists, 41 radiation oncologists and 11 specialists in palliative medicine.

The Jakarta Post October 19, 2011

- **Non Communicable Diseases the most causal of mortality rate in Indonesia**
- Its consist of Stroke, hypertension, diabetic, cancer and chronic diseases of the lung.
- Statistic from ministry of health reported that died due to non communicable diseases is increased from 41.7% in the year 1995, 49.9% in the year 2001 and 59.5% in the year 2007.
- The most causal of death is stroke (15.4%), hypertension, Diabetic, cancer, obstructive diseases of the Lung

Radiation Treatment Facilities

- In 2008, there were 22 radiotherapy centres in Indonesia, 18 Linear Accelerators and 17 cobalt units.
- There were 270 radiation oncology professionals, including 41 radiation oncologists, 38 medical physicists, 6 dosimetrists, 125 radiation therapy technologists, and 60 nurses.
- In addition, there were 17 residents and trainees participating in the Radiation Oncology training program

Radiation Therapy

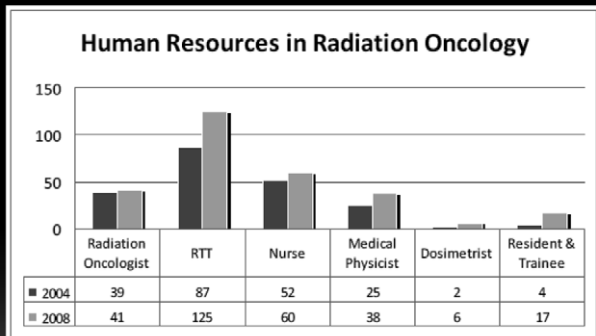


Distribution of radiotherapy centres in Indonesia. Numbers represent the number of radiotherapy centres in a city



Biomed Imaging Interv J 2008; 4(3):e42
doi: 10.2349/bijj.4.3.e42

Growth of human resources, 2004-2008



Biomed Imaging Interv J 2008; 4(3):e42
doi: 10.2349/bijj.4.3.e42

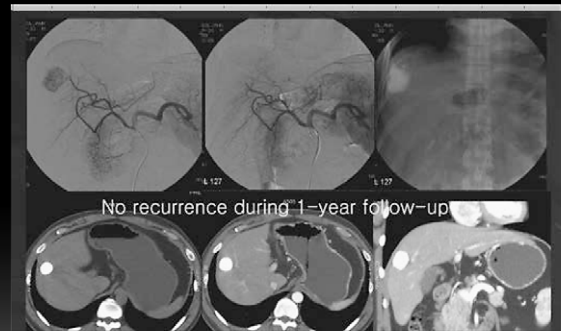
CHEMOTHERAPY

- SYSTEMIC
- INTRA ARTERIAL

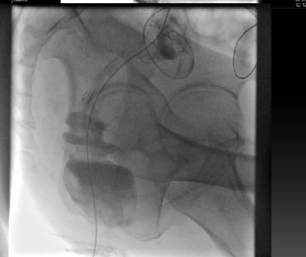
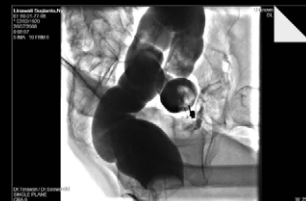
CME in Surabaya on Intraarterial Chemotherapy and palliative



SUPERselective TACE



COLONIC STENTING



Summary

- Cancer become more prevalent in Indonesia
- Multimodality treatment is already available
- Most cases came at late stage
- Screening program is needed.