

Nuclear medicine in Cambodia

Soley VAROEUN

MD, Nuclear medicine department

National Cancer Center, Calmette Hospital

Phnom Penh, Cambodia

Status of nuclear medicine and referral system in Cambodia

- Nuclear medicine is not yet available in Cambodia
- Project National Cancer Center (NCC) at Calmette hospital, Phnom Penh:
 - Radiation Oncology department
 - Oncology department
 - Hematology department
 - **Nuclear medicine department**
- NCC is currently still under construction. It is expected to finish by July 2016.

Personnel

- 2 physicians (one still training in Philippines)
- 1 medical physicist (training completed in Malaysia)
- 1 radiopharmacist (training completed in Korea)
- 2 NM technicians (will train for 6 months in Singapore)

Structure

- 1 Gamma Camera SPECT
- 1 fume hood with 2 laminar flows
- 1 Treadmill
- 2 rooms for radionuclide therapy
- 1 PET/CT (early or mid 2017)

Future planning

- Two more regional cancer centers to be established (2020?) as satellites, one in Siemreap and the other in Kratie. Each center has its own nuclear medicine department.
- One cyclotron facility to support the three nuclear medicine departments across Cambodia.

How many NM procedures are performed in Cambodia

- NM procedures are not yet available in Cambodia.
- Upon the implementation of the nuclear medicine department → the following procedures will be performed:
 - Thyroid scan
 - I¹³¹ therapy'
 - Bone scan
 - Myocardial perfusion scintigraphy
 - Lymphoscintigraphy (sentinel lymph node)
 - Radionuclide ventriculography

SWOT Analysis to enhance NM in Cambodia

Strength:

- First nuclear medicine in the country
- Personnel have been training in different centres around the world for example in France, in Republic of Korea, in the Philippines and Malaysia. Two more staffs are to be sent to Singapore for 6 months training under IAEA support program.
- Strong commitment from the government (Ministry of Health), Calmette hospital and NCC to establish the nuclear medicine department.

SWOT Analysis to enhance NM in Cambodia

Weakness:

- No dedicated nuclear medicine radiophysicist yet.
- Personnel require further training and expanded knowledge.
- Lack of electronic medical record system which makes patient recording and tracing inefficient.
- Lack of PACS (Picture Archiving and Communication System)

SWOT Analysis to enhance NM in Cambodia

Opportunities:

- Increased life expectancy by the next two decades thus, more nuclear procedure will be needed especially in oncology and cardiology
- Technical support from IAEA as well as collaboration with other centers at regional and international level

SWOT Analysis to enhance NM in Cambodia

Threat:

- High cost and lack of local supplier of radiopharmaceutical
- Absence of health insurance system which makes it unaffordable to perform nuclear medicine procedure for most patients
- Well established nuclear medicine in neighbouring countries

Radiopharmaceutical availability, cost and where it is supplied from

- NCC has been considering supplier of radiopharmaceutical from many different countries and companies. One company which is in discussion is Global Medical Solution
- Since NCC does not have a cyclotron yet, it is considering getting supply of ^{18}F FDG from Singapore.

How to promote nuclear medicine at National and Regional Level:

- Requesting assistance from IAEA for continuous and additional personnel training in more developed nuclear medicine centres at both regional and international level
- Regional cooperation between neighbouring countries for knowledge exchanges. So, it is very helpful that NCC could receive further support and cooperation from both IAEA and other countries



Thank you



NCC currently under construction