

World Congress on Medical Physics & Biomedical Engineering

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A year of volunteering in Cambodia, a family's experience

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Radiation Oncology Medical Physicist

National Cancer Centre at Calmette

Phnom Penh, Cambodia





2002 - 2003



Long history of travel



From Bells Beach...



To Angkor Wat



Australian Volunteers Program

**Australian
Aid** 



- Australian Department of Foreign Affairs and Trade
- Volunteers promote positive people-to-people links between individuals, organisations, and communities in developing countries and in Australia.

**Australian
Volunteers**
FOR INTERNATIONAL
DEVELOPMENT

ACPSEM – The Better Healthcare Foundation

- The purpose of this special interest group is to encourage and assist ACPSEM members to work with similar overseas organisations and institutions in the advancement of medical physics and engineering, especially in developing countries in the Asia-Pacific region.



- More information: www.acpsem.org.au/about-acpsem/asia-pacific-sig

September 2016

- Team of Australian Specialists arrived for 1 week
- **APROSIG team:**
- Dr Iain Ward, Christchurch – RO and APROSIG co-chair
- Dr Mei Ling Yap, Sydney – RO and APROSIG co-chair
- Dr Stephanie Corde Tehei, Sydney – medical physicist and member of APSIG, PMSF
- Kate Rogl, Cairns - radiation therapist and future AVI volunteer



Cambodia's National Cancer Centre at Calmette

November 2017



Set up

VARIAN – ARIA-
Eclipse –
GammaMed – PTW

- Breast
- HN
- Cervix



Managing expectations

គណៈកម្មាធិការជាតិប្រឆាំងមហារីក
Calmette
អង្គការជាតិប្រឆាំងមហារីក
Centre National d'Oncologie
National Cancer Center

ព្យាបាលមហារីកដោយកាំរស្មី
Varian Clinac iX

ម៉ាស៊ីនថ្មីបំផុត បច្ចេកវិទ្យាកាំរស្មីចុងក្រោយ
ព្យាបាលជំងឺមហារីកគ្រប់ប្រភេទ
សុក្រិត្យភាព ប្រសិទ្ធភាព និងសុវត្ថិភាពខ្ពស់បំផុត

Dernière technologie en radiothérapie
Pour tous les cancers
Avec la plus grande précision, efficacité et sécurité

Cutting-edge radiation technology
For all cancers
Highest precision, efficacy and safety



ជម្រើសថ្មី ប្រសិទ្ធភាពខ្ពស់!
Nouveau choix pour la meilleure efficacité!
New choice for maximum efficacy!

គណៈកម្មាធិការជាតិប្រឆាំងមហារីក
Calmette
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National Cancer Center

ម៉ាស៊ីនប្រាតិកេរ៉ាពី
HDR Brachytherapy

ម៉ាស៊ីនស្តុកព្យាបាលជំងឺមហារីកមាត់ស្បូន
បច្ចេកវិទ្យាកាំរស្មីចុងក្រោយ
ប្រសិទ្ធភាពខ្ពស់បំផុត ប្រើពេលខ្លី

HDR Brachythérapie pour le traitement du cancer du col
Haute technologie en radiothérapie
Efficacité, du temps gagné

HDR Brachytherapy for cervical cancer treatment
State-of-the-art radiation therapy technology
Highly effective, time-saving



ដៃគូព្យាបាលជំងឺមហារីកមាត់ស្បូន ផ្តល់ទំនុកចិត្តខ្ពស់!
Votre partenaire en toute confiance pour le cancer du col!
Your most trusted partner for cervical cancer!

Varian Clinac® iX System

Varian's historic and solid investment makes Calmette a sophisticated and reliable radiotherapy Provider.

High performance Clinac® is a reliable accelerator built on the proven C-series platform. This powerful workhorse has treated thousands of patients around the world every day, designed to deliver a wide range of imaging and patient treatment options, the Clinac system offers advanced features to facilitate state-of-the-art treatments including RapidArc and stereotactic radiosurgery.



Eclipse™ Treatment Planning System
Latest knowledge in the system and applications that make Eclipse the most powerful and accurate treatment planning system.

RapidPlan Knowledge Based Planning Software
Quickly creates treatment plans for a wide range of cancer sites, reducing planning time and increasing accuracy.

On-Board Imager (OBI)
Real-time imaging for precise patient positioning and treatment verification.

Workload

CT

Linac

Radiation
Protection

Brachytherapy

Nuclear Medicine

Planning



Where we are now

- Commissioned the GECT 16 slice
- Commissioned Clinac21iX Linac for 3DCRT
- Photons
- Electrons
- Treating from end March 2018
- Substantial waiting list



Major challenges

Humidity	equipment
Language	technical
Education	modality
Recognition	role
Regulations	Laws
Collaboration	Uni, MP
International	experts
Funding	meetings, equipment

Technical challenges humidity



Equipment challenges



The future for the National Cancer Centre

- Staff recruitment
-
- Brachytherapy – Ca Cervix
 - Invivo dosimetry
 - 2nd linac
 - 2nd Medical Physicist MSc - woman
 - IMRT (HN) / VMAT
 - Co-operation and communication b/w
Medical Physicists in Cambodia

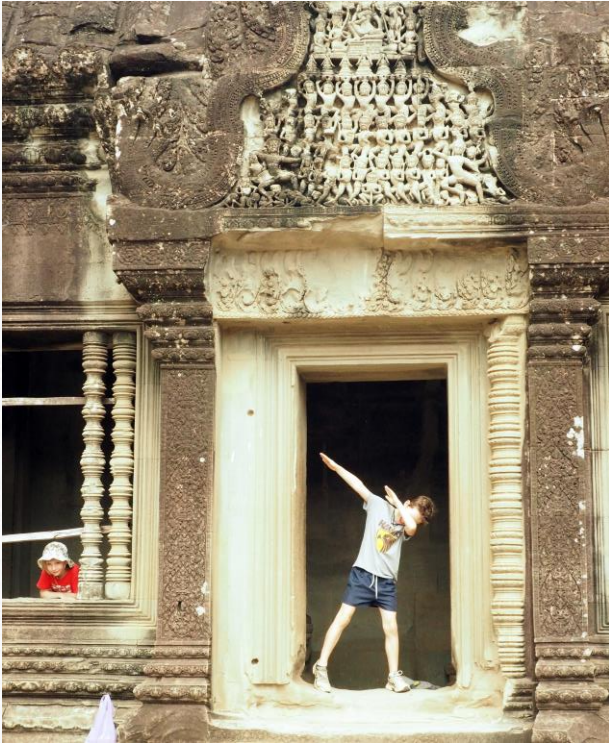


The future for the National Cancer Centre

- Establishing a cancer registry
- Improvement of clinical skills
- Establishing a culture of research
- Expand to the provinces
- Continue to strengthen the collaboration between the NCC and Australia/NZ



Family - thriving



Volunteering

- Sound challenging?
-
- Get scared
 - Do it anyway
 - Make a difference

References

- Bruni L, Barrionuevo-Rosas L, Albero G, Serrano B, Mena M, Gómez D, Muñoz J, Bosch FX, de Sanjosé S. ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre). Human Papillomavirus and Related Diseases in Cambodia. Summary Report 27 July 2017.