Activities in the Asia Pacific region. Where are we?

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Medical Physics is the same all over the world

Science and cancer work the same all over the world
Professional practice & standard, development the same?
2/3 of world population live in Asia

Diverse geographically, culturally, economically & technologically.

IOMP Regional Organizations in Asia
- AFOMP: 24 members
- SEAFOMP: 10 members

AFOMP was established at WC2000 Chicago in 2000
- Close collaboration and mutual support among its members
- Cross regional collaboration and interaction on medical physics
Founding Fathers and Mothers of SEAFOMP (except 4th person from left)  2003

Anchali Krisanachinda
Agnette Peralta
Djarwani Soejoko
Ratana Pirabul
Ng Kwan Hoong

Theme:
Continuous quality improvement in medical imaging and radiotherapy

Organizing Chairperson
Ng Kwan Hoong
Gary Fullerton
Regional Scientific Activities

AFOMP (AOCMP): 18 conferences since formation in 2000
SEACOMP (SEACOMP): 16 meetings since formation in 2000

**AOCMP**
- 2001 – Bangkok, Thailand
- 2002 – Gyeongju, Korea
- 2003 – Sydney, Australia
- 2004 – Kuala Lumpur, Malaysia
- 2005 – Kyoto, Japan
- 2006 – Seoul, Korea
- 2007 – Huang Shan, China
- 2008 – Ho Chi Minh, Vietnam
- 2009 – Chiang Mai, Thailand
- 2010 – Taipei, Taiwan
- 2011 – Fukuoka, Japan
- 2012 – Chang Mai, Thailand
- 2013 – Singapore
- 2014 – Ho Chi Minh, Vietnam
- 2015 – Xi’an, China
- 2016 – Bangkok, Thailand
- 2017 – Jaipur, India
- 2018 – Kuala Lumpur, Malaysia

**SEACOMP**
- 2001 – Kuala Lumpur, Malaysia
- 2002 – Bangkok, Thailand
- 2003 – Kuala Lumpur, Malaysia
- 2004 – Kuala Lumpur, Malaysia
- 2005 – Jakarta, Indonesia
- 2007 – Manila, Philippines
- 2008 – Ho Chi Minh, Vietnam
- 2009 – Chiang Mai, Thailand
- 2010 – Bandung, Indonesia
- 2011 – Bohol, Philippines
- 2012 – Chiang Mai, Thailand
- 2013 – Singapore
- 2014 – Yogyakarta, Indonesia
- 2015 – Iloilo, Philippines
- 2016 – Ho Chi Minh, Vietnam
- 2017 – Iloilo, Philippines
- 2018 – Kuala Lumpur, Malaysia

*Formed in Oct 2014, HCM City*
<table>
<thead>
<tr>
<th>ACOMP</th>
<th>Date</th>
<th>Venue</th>
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<tbody>
<tr>
<td>1. AAPM/ IOMP/ ISEP Imaging Physics Workshop</td>
<td>Nov 11-14 2015</td>
<td>Kuala Lumpur</td>
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<tr>
<td>2. Workshop on Digital Radiography (13th SEACOMP)</td>
<td>Dec 10 2015</td>
<td>Yogyakarta</td>
</tr>
<tr>
<td>4. Workshop on Digital Radiography (ICMP Bangkok)</td>
<td>Dec 11 2016</td>
<td>Bangkok</td>
</tr>
<tr>
<td>5. Workshop on Monte Carlo Simulation of LINAC Head modeling and Dose Calculation</td>
<td>Jul 11-14 2017</td>
<td>Bandung</td>
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<tr>
<td>6. Radiofrequency Radiation Protection</td>
<td>Dec 4 2017</td>
<td>Iloilo</td>
</tr>
<tr>
<td>7. UI/ISEP AAPM/ACOMP Imaging Physics Course</td>
<td>Oct 4-7 2018</td>
<td>Jakarta</td>
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</table>

**John Cameron Memorial Lecture**

Inaugurated by SEAFOMP in 2004 in honour of the late Professor John Cameron

**John Cameron Lecturers**
3 surveys of radiation oncology medical physicist (ROMP) practice were conducted in 23 countries in the Asia Pacific Region in 2008, 2011 and 2014.

The number of MPs nearly doubled in this period.

The number of megavoltage treatment units increased as did the complexity of procedures.

Job satisfaction remained moderate due to high workload and lack of professional recognition.

ROMP practice remained essentially unchanged over the last 6 years.

Medical physics aspects of cancer care in the Asia Pacific region

Newhauser (2017), The medical physics workforce

Kron et al (2016) Surveying trends in radiation oncology medical physics in the Asia Pacific Region

No of ROMP per 1 million of population

USA
New Zealand
Hong Kong, China
Taiwan
Japan
Singapore
South Korea
Nepal
Bhutan
Vietnam
India
PR China
Sri Lanka
Thailand
Vietnam
Philippines
Pakistan
Bangladesh
Australia
New Zealand

No of ROMP per 1 million of population

K-H Ng
AFOMP POLICY STATEMENT No. 1
The role, responsibilities and status of the clinical medical physicist in AFOMP

K. H. Ng,1 K. Y. Cheung,1 Y. M. Hoo,2 K. Isumura3 H. J. Kim6 , A. Kruasachinda7, J. Lung8, A. S. Pradhan,1 H. Rouad2, T. van Doom4, T. J. Wong1 and B. Y. Yi1

AFOMP POLICY STATEMENT No. 2: recommended clinical radiation oncology medical physicist staffing levels in AFOMP countries

W. H. Rouad, Y. K. Tse, K. H. Ng, K. Y. Cheung, S. Fukuda, Y. Han, Y. X. Huang, H. J. Kim, A. Kruasachinda, H. L. Law

AFOMP Policy Statement No. 3: recommendations for the education and training of medical physicists in AFOMP countries


AFOMP Policy Statement No. 4: recommendations for continuing professional development systems for medical physicists in AFOMP countries

The role of the project is to assess and coordinate efforts to address Medical Physics capability.

- Capacity and recognition and allow an integrated outcome.
**Education and Training of Medical Physicists**

**Competency of Clinically Qualified Medical Physicists**

**Certification Structure**

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**Two key outcomes from RAS6038**

2003-2012

<table>
<thead>
<tr>
<th>Objective</th>
<th>Progress</th>
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</thead>
<tbody>
<tr>
<td>Development of guides for clinical training of medical physicists in the disciplines of ROMP, DRMP or NMP.</td>
<td>The 3 guides developed Available in English, Russian, French and Spanish</td>
</tr>
<tr>
<td>Trialling of the programs in a number of member states.</td>
<td>4 ROMP trials 3 DRMP trials 3 NMP trials</td>
</tr>
</tbody>
</table>

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**Clinical training guidelines**
Addressing regional issues in RAS6077
2014-2017

Patients denied adequate diagnosis and treatment with radiation medicine

- Shortage of appropriate equipment and medical health professionals
- Shortage of clinically qualified medical physicists
- Lack of recognition of the role of medical physicists
- Small numbers make viability of academic education difficult
- Lack of clinical training opportunities
- Lack of continuous education opportunities
- Lack of knowledge of radiation safety standards
- Low professional profile

RAS6087
IAEA/RCA project 2018-2021 on medical physics clinical training.
Emphasis on TCDC, continuing the development of AMPLE, setting guidelines for clinical training.

RAS6088
IAEA/RCA project 2018-2021 on strengthening medical physics postgraduate education programmes.

KH Ng

AFOMP POLICY STATEMENT No. 1
The role, responsibilities and status of the clinical medical physicist in AFOMP

K. N. Ng1,2, T. A. Trong3, Y. M. Bui3, K. Iman6, H. J. Kim3, A. Krishnaswami2, J. Lim2, A. S. Prud’homme1, H. Rouab1, T. van Doorn1, T. J. Wong2 and B. Y. Yi2

AFOMP POLICY STATEMENT No. 2: recommended clinical radiation oncology medical physicist staffing levels in AFOMP countries

W. H. Round1, Y. K. Tay1, K. N. Ng1, C. Y. Cheung1, S. Fukuda1, Y. H. Yan1, X. Huang1, H. J. Kim2, A. Krishnaswami1, H. L. Liu1

KH Ng
International Scientific Program Exchange Program

Since 2000 9 workshops in Asia

The impact at a time of
- rapid technology transition from traditional to image-based radiotherapy technology.
- rapid technology transition from traditional to digital imaging.

Cheng B Saw

AAPM-ISEP

AAPM Newsletter
January/February 2013

International Scientific Exchange Program Report

AAPM/ISEP Diagnostic Imaging Workshop 2013, Montian Hotel – Surawong Road,
Bangkok, Thailand, November 6th – 8th, 2013

Cheng B Saw, PhD, FAAPM and Jihong Wang, PhD (Course Directors)
Anchali Krisanachinda, PhD (Host Organizer)

A joint workshop under the International Scientific Exchange Program (ISEP) of the American Association of Physicists in Medicine (AAPM) in collaboration with the International Scientific Exchange Program (ISEP) of the International Atomic Energy Agency (IAEA).

The workshop was supported by AAPM and IAEA.

The workshop was coordinated by Dr. Jihong Wang, FAAPM, and Dr. Anchali Krisanachinda, PhD.
<table>
<thead>
<tr>
<th>Country</th>
<th>Population (millions)</th>
<th>No. of ROMPs 2014</th>
<th>% of ROMPs with more than 10 years experience</th>
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<tr>
<td>Australia</td>
<td>23.2</td>
<td>340</td>
<td>44</td>
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<tr>
<td>Bangladesh</td>
<td>157</td>
<td>29</td>
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<tr>
<td>Brunei</td>
<td>0.4</td>
<td>3</td>
<td>30</td>
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<tr>
<td>Cambodia</td>
<td>7.2</td>
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<td>Hong Kong, China</td>
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<td>1000</td>
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<td>Indonesia</td>
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<td>Japan</td>
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<tr>
<td>South Korea</td>
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<td>Malaysia</td>
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<td>Mongolia</td>
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<td>Papua New Guinea</td>
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Source: Kron et al. Surveying trends in radiation oncology medical physics in the Asia Pacific Region. KH Ng

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (millions)</th>
<th>No. of NM MP</th>
<th>No. of DR MP</th>
<th>No. of RT MP</th>
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<td>115</td>
</tr>
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Source: IAEA: Recommendations for accreditation and certification of medical physics education and clinical training programmes in the RCA region. KH Ng