



IAEA

International Atomic Energy Agency



RCA



RAS6065

Progress Report of 2014

(Republic of Korea)



Ministry of Science, ICT and
Future Planning



**KOREA INSTITUTE OF
RADIOLOGICAL & MEDICAL SCIENCES**

Project overview



- **Title** : Strengthening the Application of Stereotactic Body Radiation Therapy(SBRT) to Improve Cancer Treatment
- **Project Number** : RAS6065
- **Duration** : 2012~2015 (4 years)
- **Objectives** : To improve cancer treatment in the RCA region through strengthening the application of SBRT
- **Lead Country** : Republic of Korea
- **LCC** : President Dr. Chul-Koo Cho,
Korea Institute of Radiological & Medical Sciences (KIRAMS)
- **IAEA PMO** : Mr. Sinh V. Hoang
- **IAEA TO** : Mr. Rajiv R. Prasad

Technology overview



[**Cancer epidemic** : it's Increasing & causing socio-economic damage]

● **Cancer treatment** : Surgery, Chemotherapy, Radiotherapy

● **SBRT** : Stereotactic Body Radiation Therapy

Conventional Radiotherapy	SBRT
Relatively small doses	High dose
30~40 fractionations	Up to 5 fractionations

● **Benefits**

- Better treatment results
- Less side effects
- Enhanced quality of life (shorter overall treatment time)
: especially for a country with a few radiotherapy facilities available only in big cities

Participating Countries



18 MSs : Australia
Bangladesh
Cambodia
China
India
Indonesia
Japan
Korea, Republic of
Malaysia
Mongolia
Myanmar
Nepal
Pakistan
Philippines
Singapore
Sri Lanka
Thailand
Vietnam



Strategies



**Regional
level**

**Regional
Training
Course**

**Expert
Mission**

Guidelines

**Sustainable
network**

**National
level**

National Training Activities

Promotion of Awareness

**Outreached
target**

**RO
MP
RTT**

Physician

**Policy
makers**

**General
public**

Work Plan



Year	Regional Activity
2012	Project Planning MTG(ROK) 1 st RTC(SIN)
2013	SBRT Guidelines on lung, liver cancer 2 nd RTC(ROK)
2014	Mid-term Review MTG(MON) 3 rd RTC(JPN) Sustainable Regional Network
2015	4 th RTC(AUL) Expert Missions Final Review MTG(ROK)

Regional Activities in 2014



[Mid-term Review Meeting]

- **Dates** : Jun 30~July 4, 2014
- **Venue & Organizer** : National Cancer Center of Mongolia
 - Supported by Nuclear Energy Agency of Mongolia
- **Participants** : 19 participants from 14 Member States
(AUL, BGD, CPR, IND, JPN, KAM, MAL, MON, PHI, ROK, SIN, SRL, THA, VIE)
- **Purpose** : To review progress & revise work plan



Mid-term Review Meeting (cont.)



● Progress confirmed

- SBRT newly introduced/applied in more centers
: survey at Final Review MTG & publish a paper

● Work Plan revised

- Details reviewed, Specified the dates of regional events, SWOT analysis

● Regional Training Hubs identified

- 6 regional training hubs for sustainable network
: ROK(Coordinator), AUL, JPN, SIN, IND, CPR
- An interactive website will be constructed by ROK in 2015
- Share training opportunities besides IAEA, useful materials, expert pool, clinical studies, protocol research, etc
- A sense of responsibility expressed as a technical donor

Mid-term Review Meeting (cont.)

- **Strong network of participating MSs under TCDC**

- A sense of responsibility based on strong bond, mutual understanding



Regional Activities in 2014



[IAEA/RCA Regional Training Course on Clinical Application of Stereotactic Body Radiation Therapy (SBRT) in Head and Neck, Spinal and Liver Cancers]

- **Dates** : Oct 20~24, 2014
- **Venue** : Tokyo Metropolitan Kamagome Hospital, Japan
- **Participants** : 30 participants from 15 Member States
(Radiation oncologists & medical physicists)
- **Program** : Lectures, practical activity with simulated planning



Regional Training Course (cont.)

Evaluation : Successfully completed and highly evaluated



Applied Radiation Biology and Radiotherapy Section (ARBR)
Division of Human Health – IAEA

Course Evaluation Form

Purpose: To collect feedback for improving the quality of future training and educational events.

Course title	Code	Venue (City, Country)	Date	Course Director	Host Institute	IAEA Technical Officer
SBRT in hn,sp,lv	6065/003	Tokyo, Japan	20-24 Oct.2014	Katsuyuki Karasawa	Komagome Hp.	Nazim SI Ahmed

Section A: Course evaluation
Instruction: For each statement, please check ONLY one number that best describes your opinion.
(1 = strongly disagree; 2 = disagree; 3 = unsure; 4 = agree; 5 = strongly agree)

	1	2	3	4	5
The management and organization of the course was appropriate.					✓
I received instructions and background materials to properly prepare for the training.					✓
The learning objectives for the course were clearly outlined.					✓
The course provided the goals and learning outcomes formulated by the organizers.					✓
The quality of the course materials was adequate.					✓
The course content was suitably comprehensive for my needs.					✓
The time scheduled for each session was adequate.					✓
The practical / demonstration sessions were useful.					✓
The information was relevant and useful to my routine work.					✓
My knowledge on the topic has been improved.					✓
My personal expectations were met.					✓
The information was well balanced and supported by evidence.					✓
Faculty demonstrated a thorough knowledge of the subjects.					✓
The programme allowed adequate time for questions and discussion.					✓
The facilities and venue for the course were acceptable.					✓
The audio-visual systems were adequate.					✓
The overall training experience was satisfactory.					✓

Please write your additional comments:
SBRT would have been helpful

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Please write your additional comments:
Course was very well organized. Good ideas great. Very organized approach to leaders

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Please write your additional comments:

Dr. Karasawa organized the best course!

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National Activities in 2014



[Overview]

● Dissemination of knowledge

- National training event, educational site visit, conference/seminar

● Promotion of awareness

- Policy makers, physicians, general public

● Technical contributions

- Contribution by resource countries

● Establishment of infrastructure

- Installation of RT machine, building of cancer center

● Introduction/application of SBRT

- Newly started SBRT, expanded application of SBRT to other organ sites

National Activities in 2014



● Dissemination of knowledge

- **AUL** : Organized SBRT training day 2014 with Sydney Univ. & professional associations. 160 Radiation Oncologists, Medical Physicists, Radiation Therapists attended the course
- **BGD** : Head & Neck cancer conference, Bangladesh Cancer Congress. Different training program periodically supported by Director General of Health



National Activities in 2014



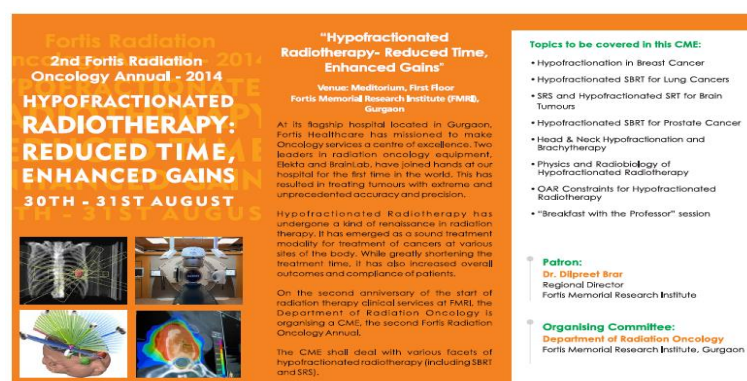
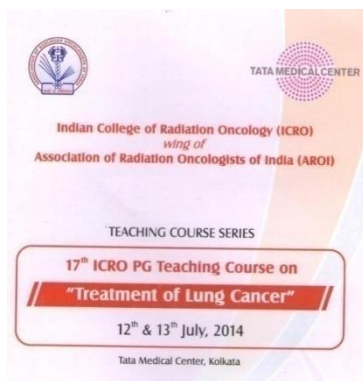
● Dissemination of knowledge

- **CPR** : Organized Global Advance Symposium of Therapeutic Radiology and Oncology (GASTRO)

- **IND** : ICRO Post graduate Teaching Course on



Lung cancer, Seminar on 'Hypofractionated Radiotherapy: Reduced time, Enhanced gains', Dedicated sessions of SBRT in lung cancer at HCG RADICON and the 36th Annual National Conference of Radiation Oncologist



National Activities in 2014



● Dissemination of knowledge

- **MON** : National Seminar co-organized with the department of neurosurgery of 3rd clinical hospital
- **PHI** : Conference on Multi-disciplinary Perspectives in the Innovative Approach to Metastatic Cancer: Radiobiological basis & current evidence (lecturers from SIN, ROK)



National Activities in 2014



● Dissemination of knowledge

- **THA** : Annual Scientific Meeting of the Thai Society of Therapeutic Radiology and Oncology (THASTRO) at Dusit Thani, National Workshop on the immobilization for SBRT at Ramathibodi Hos. (Instructor from AUL National Team)

Thai Society of Therapeutic Radiology and Oncology

Scientific Annual Meeting

DUSIT THANI PATTAYA, THAILAND

14th - 16th MARCH 2014

Friday 14th March 2014

Practicing Thoracic Radiation Oncology : From Photon to Proton
Carbon Ion Therapy
Luncheon Symposium 1 sponsored by MSD
Comprehensive Cancer Center
3D-CRT vs IMRT in Cervical Cancer
IAEA training course : SBRT- Lung&Liver Guidelines
Quality Management in Radiotherapy
Communication Skill: Breaking Bad News and Truth Telling in Cancer Patient
Optimal Benefit with Targeted Therapy in Real Practice sponsored by Merck

Saturday 15th March 2014

Adaptive Radiotherapy in Gynecological Cancer sponsored by BA
Comprehensive Cancer Hospital
Interactive Case Discussion : CA lung
Effect of AEC to medical personnel
RTT in the Era of Modernized Radiation Oncology
Luncheon Symposium 2 - Sponsored by PBI
Safety Consideration in Advanced Radiotherapy
Proton Therapy in Thailand sponsored by Transmedic
ASTRO 2013

Logos: BIA, Varian, Merck, MSD, PBI, Transmedic



**IAEA Training Course:
SBRT-Lung & Liver
Guidelines**



National Activities in 2014

● Dissemination of knowledge

- **THA** : RTC materials at THASTRO website

หน้าหลัก

สารจากนายกสมาคมฯ เดือนเมษายน พ.ศ. 2557

Resource of IAEA RTC-RAS6065 : Liver and Lung SBRT

Resource จาก IAEA RTC-RAS6065 : Liver and Lung SBRT

2nd Regional Training Course of RAS6065, Focused on SBRT for Liver and Lung
Date: Dec 2-6, 2013
Venue: Korea Institute of Radiological & Medical Sciences (KIRAMS), Seoul, Republic of Korea
IASARCA Lung/Liver SBRT Course 2013

National Activities in 2014



● Promotion of awareness

- **AUL** : Advocacy with the Ministry of Health to encourage further implementation of SBRT
- **IND** : Published 'Practice of Stereotactic body radiotherapy in a developing country: Perception, Aspiration and Limitation - A survey' in Indian Journal
- **MON** : Broadcasted the Mid-term Review Meeting at UBS
Gov't officials invited to the meeting for the whole period
- **THA** : Proposed the reimbursement scheme for SBRT to the Govt. Waiting for final approval from the Ministry of Public Health, then, final judgement by the Ministry of Finance

National Activities in 2014



● Technical contributions

- **Medical physicist of ROK** visited National Cancer Center of Mongolia to support the change of source for Cobalt 60 (The only RT machine)
- **Radiation oncologist and medical physicist of ROK** visited National Cancer Institute of Sri Lanka to provide lecture & technical consultation on SBRT
- **Experts of SIN, ROK** provided lectures at the International conference in PHI
- **Expert of AUL** provided lecture at the national workshop of Thailand
- **Radiation oncologists of JPN, CPR** participated in the 3rd Regional Training Course as invited lecturers



National Activities in 2014



● Establishment of infrastructure

- **BGD** : Additional linear accelerator to the National Institute of Cancer Research and Hospital supported by the Ministry of Health
- **KAM** : Establishment of National Cancer Centre at Phnom Penh (3 LINACs), Launched the National Anticancer Policy

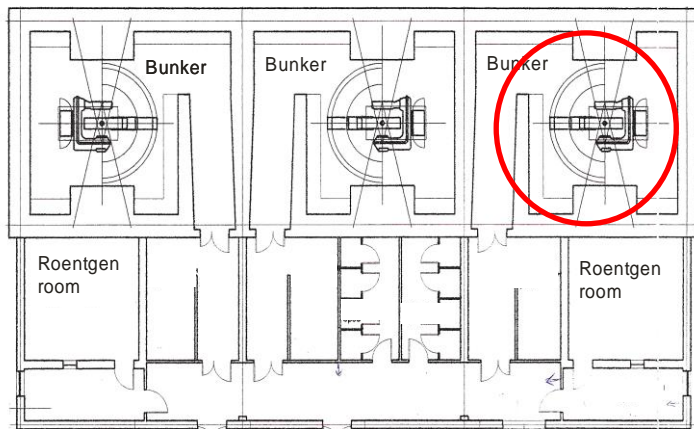


National Activities in 2014



● Establishment of infrastructure

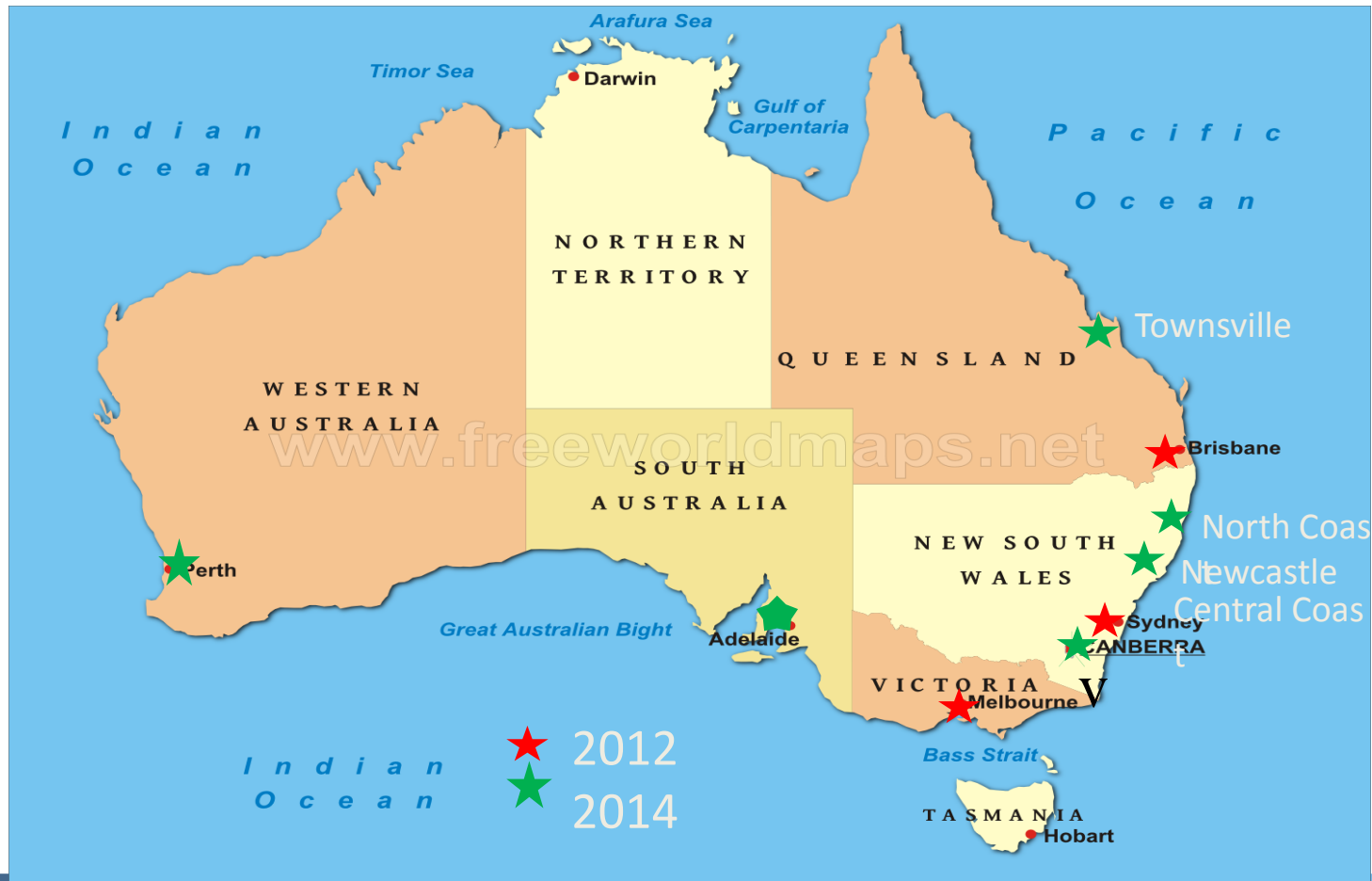
- **MON** : National project to install 2 new LINACs at National Cancer Center
Proposed project titled 'Introduction of Stereotactic Radiation Treatment in Mongolia' to the Ministry of Health
- **SRL** : National plan to install 3 LINACS at Colombo, Galle, Kandy
(One already installed at NCI in Feb 2014)
- **VIE** : National plan and Vision to 2020
(1 RT machine/million – WHO recommendation)



National Activities in 2014

● Introduction/application of SBRT

- **AUL** : 6 more centers initiated SBRT in 2014



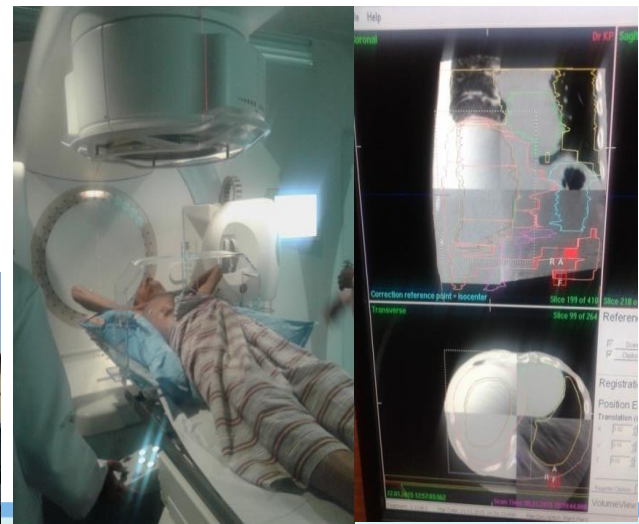
National Activities in 2014



● Introduction/application of SBRT

- **BGD** : Initiated SBRT in private sector (5 patients)
- **SRL** : The 1st SBRT case of liver cancer with newly installed LINAC
- **IND, THA, INS, MAL, PHI** : Increased number of centers identified

<RTC> ➡ <Fellowship> ➡ <Expert Mission> ➡ <New machine> ➡ <1st SBRT>
(On-line consultation throughout the period)



Go! Together!

KIRAMS

Work Plan of 2015



● The 4th Regional Training Course

- Dates & Venue : July 20~24, 2015, Sydney Univ.
- Target : Radiation Oncologist, Medical Physicist, Radiation Therapist
- Theme : SBRT for spine & prostate cancer

● Expert Mission

- TBD : To support newly started SBRT program

● Final Progress Review Meeting

- Dates & Venue : November 16~20, 2015, ROK
- Discussion : Review activities, evaluation of progress, survey & publication, regional training hubs
- **Project Planning Meeting of the new project in 16-17 TC cycle**
: Enhancing Stereotactic Body Radiation Therapy for Frequent Cancers in the RCA Region (RAS2014011)

Special Acknowledgement

- JPN hosted with a responsibility of technical donor & regional training hub



