

RAS6098

“Standardizing Radiotherapy in Palliative Care (RCA)”
4 years (2022-2025)

RAS6110

“Improving the Radiotherapy Capacity of Newcomer
Government Parties (RCA)”
4 years (2024-2027)

Takashi Nakano, MD. PhD.

RCA NR of Japan

Overview of RAS6098

- Title : Standardizing Radiotherapy in Palliative Care (RCA)
- Project Duration : 4 years (2022-2025)
- Field of Activity: Radiation oncology in cancer management
- LCC : Masaru Wakatsuki, MD. PhD. Japan
- GPs: 21 GPs:AUL, BGD, CPR, IND, INS, JPN, KAM, LAO, MAL, MON, MYA, NEP, NZE, PAK, PLW, PHI, ROK, SIN, SRL, THA, VIE

Project background

- Radiation therapy is one of the most effective treatments **to relieve cancer symptoms**. The most commonly relieved symptoms of **palliative RT** are pain, bleeding and organ obstruction caused by tumours. The importance of **palliative RT** has been recognized even in high-income countries. In low- and middle-income countries, **palliative RT** is especially necessary because most patients are diagnosed when **symptoms are severe**, and **cancer progresses beyond cure**. Because the availability of RT services is somewhat limited in many RCA GPs, the efficiency of palliative RT is very important.

Overall Objective

- Improvement of the Quality of Life (QOL) for cancer patients in the RCA region.

Outcomes

- Improvement of the management of palliative care in the RCA region through **standardized practice of palliative RT** by **trained professionals** and development of **Clinical Practice guidelines** for palliative radiotherapy suited for status of RCA GPs.
- **Indicator for outcome**
- **Number of RCA GPs with facilities** using the practice guideline for palliative radiotherapy and **number of patients** treated according to the practice guideline of palliative RT.

Outputs

- **Project Management Team** Operational
- **Radiotherapy professionals** trained on comprehensive management of palliative radiation therapy
- Development of **Clinical Practice guidelines** for palliative radiotherapy suited for situations in RCA GPs

Work Plan(2022-2023)

Project Kick-off Meeting (22-25March 2022) with web meeting

RTC1: Host: **Japan** Date **25-28 October, 2022** Venue: **online**

Title: RTC on palliative RT for bone metastases.

Objective: to provide the knowledge and skills of palliative RT for bone metastases in the comprehensive palliative care.

Target participants: National project team members of the participating GPs. (Each GP should nominate a radiation oncologist and a medical physicist)

RTC2: Host: **Pakistan** Date: **20-23 June 2023** Venue: **Islamabad, Pakistan**

Title: RTC on palliative RT for brain metastases and other clinical scenarios (e.g., advanced head and neck Ca. cases, bleeding ...)

Objective: to provide the knowledge and skills of palliative RT for Brain metastases and other clinical scenarios (head and neck, bleeding ...) in the comprehensive palliative care.

Target participants: National project team members of the participating GPs. (Each GP should nominate a radiation oncologist and a medical physicist)

Midterm Review Meeting: Date Q4 2023 Venue: Melbourne, AUS (Back up: Mumbai, India) **postponed**

- The Mid-term review meeting was scheduled for December but was postponed until June 2024 owing to various reasons.

Work Plan (2024-2025)

Midterm Review Meeting: 24th – 28th June, 2024 Venue: Chiba JPN

RTC3: Host: Indonesia **Date** 2nd – 6th December, 2024 **Venue:** Indonesia
Title, Objective and Target participants will be discussed in Midterm Review Meeting.

RTC4: Date Q2-3 2025
Details will be discussed in **Midterm Review Meeting this year.**

Final Review Meeting: Date Q4 2025
Details will be discussed in **Midterm Review Meeting this year.**

IAEA/RCA PROJECT RAS 6098 RTC #1:

A palliative RT for bone metastases, Virtual, 6th-9th Dec. 2022

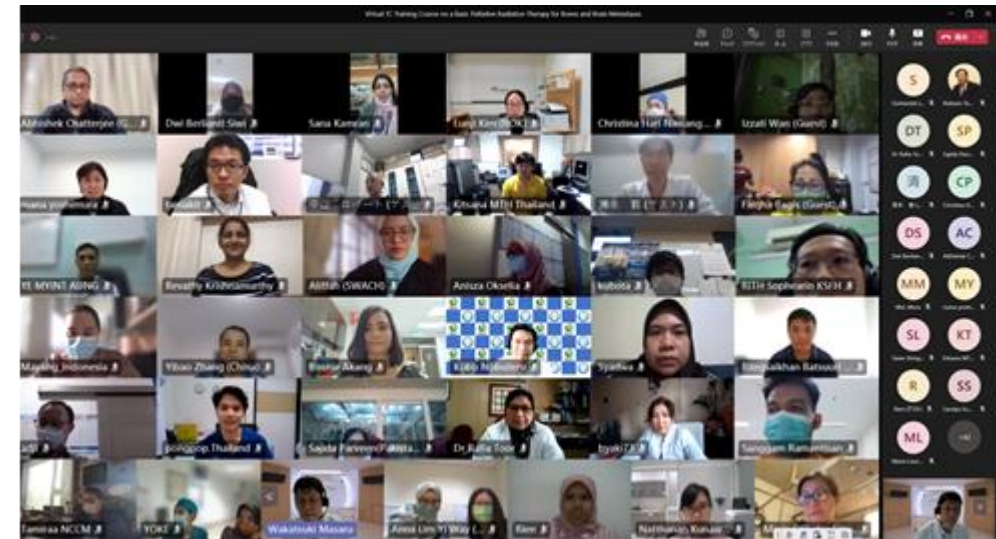
- 15 Countries, 47 participants

GPs: Australia, Bangladesh, Cambodia, China, India, Indonesia, Japan, Korea, Malaysia, Mongolia, Myanmar, Pakistan, Singapore, Thailand, IAEA,

- 16 lecturers from Japan

Contents of RTC

- Diagnosis for bone metastases
- Cancer board for bone metastases
- RT for bone metastases
- Other modality for bone metastases
 - Opioid therapy, Drug therapy, Psycho-oncology, Rehabilitation
- Case Discussion

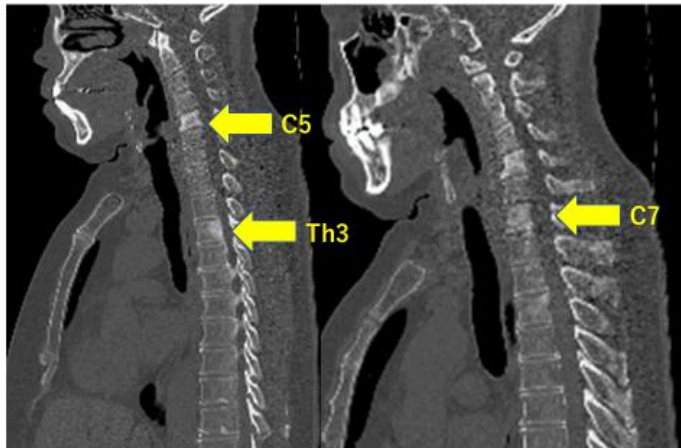


IAEA/RCA PROJECT RAS 6098 RTC #1:

A palliative RT for bone metastases, Virtual, 6th-9th Dec. 2022

Case Discussion

CT Images



C5,C7,Th3 bone metastases

Multiple liver metastases
Image is not shown

Diagnosis of bone metastases
by ^{99m}Tc -MDP bone scintigraphy
and ^{18}F -FDG PET/CT

Mana Yoshimura
Department of Radiology
Tokyo Med
Tokyo

Section 3-1: Cancer board for bone metastases

Cancer board for bone metastases

Yasuo Ejima
Department of Radiology, Dokkyo Medical University, Tochigi, Japan

聖マリアンナ医科大学
St. Marianna University School of Medicine

Take home message

- The treatment plan for palliative RT should not be decided only on the disease status, but should fully take into account the patient's wishes, access to hospitals, family support, and other factors.
- The correct treatment plan varies from patient to patient.

IAEA/RCA PROJECT RAS 6098
A palliative RT for bone m

Re-irradiation for Bone Metastases

Department of Radiation Oncology,
St. Marianna University School of Medicine
Naoki Nakamura

IAEA/RCA PROJECT RAS 6098 RTC #2:

RTC on Palliative Radio-therapy for Brain Metastases and other Clinical Scenarios @ Islamabad , Pakistan on Sept. 18-21, 2023.



- 15 countries, 34 participants

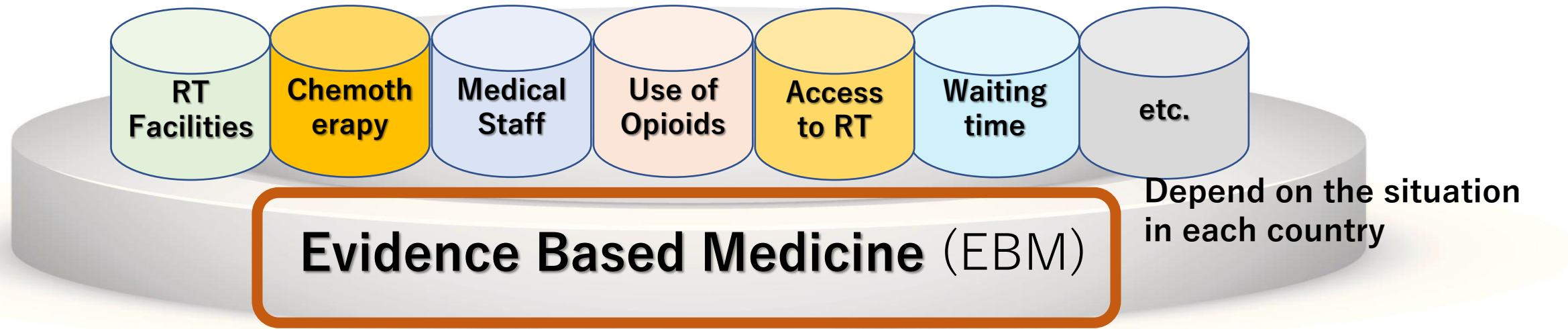
GPs : Bangladesh, Cambodia, Indonesia, Japan, Malaysia, Mongolia, Myanmar, Pakistan, Philippines, Viet Nam,

Contents of RTC

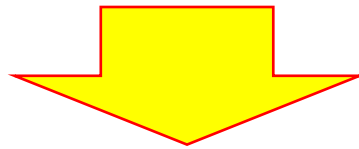
- Diagnosis for brain met.
- Management of brain met.
- Palliative radiation in H&N Ca.
- Case discussion
(at Multidisciplinary Tumor Board)



The Aim of RTC



Regional Training Course (RTC)



National Training Course in each GP



Step up guidelines for palliative RT



3rd Step: High-precision palliative RT

Sufficient medical staff, high tech RT machine, cost-effectiveness,,,, etc.

2nd Step: Advanced palliative RT
Sufficient opioids, Short waiting time, Collaboration with medical oncologist,,,, etc.

1st Step: Basic palliative RT

Evidence Based Medicine (EBM)

- What should the treatment at each stage be?
- What Factor are needed at each stage?



Next project

RAS6110

Overview of RAS6110

- Title : Improving the Radiotherapy Capacity of Newcomer Government Parties (RCA)
- Project Duration : 4 years (2024-2027)
- Field of Activity: Radiation oncology in cancer management
- LCC : Yoshiyuki Suzuki, MD. PhD. Professor of Fukushima Medical University Japan
- GPs: 18GPs: BGD, CPR, FIJ, IND, INS, JPN, KAM, LAO, MAL, MON, MYA, NEP, PAK, PAL, PHI, SRL, THA, VIE

Project background

- Radiation therapy is one of the most effective treatments **to cure various cancer**. However, establishing adequate radiotherapy services is a significant challenge for low and middle income countries (LMICs). **Out of the five newcomer RCA GPs, Cambodia, Nepal, and the Lao People's Democratic Republic (PDR) currently have basic level radiotherapy capacity, while Fiji and Palau do not.** RCA is an ideal platform for promoting radiotherapy capability development in these five GPs, offering ample knowledge and experience from many different social/economic/geographical backgrounds.

Overall Objective

- To develop newcomer GPs (Cambodia, Fiji, Lao P.D.R, Nepal and Palau) the capacity of building radiation therapy facilities and providing basic radiotherapy service for their cancer patients.

Outcome

- Improved capacity in newcomer GPs to provide sustainable access to radiotherapy

Work Plan

Project Kick-off Meeting(1): WEB (23-24, April 2024)

Activities : The following work plan was decided

Project Kick-off Meeting(2): Japan (15-18, October 2024)

RTC1: Pakistan (Q4, 2024)

To train radiotherapy professionals on safety and quality management of radiotherapy

RTC2: Indonesia (TBD) (Q4, 2025)

To train radiotherapy professionals on management of external radiotherapy

RTC3: India (TBD) (Q4, 2026)

To train radiotherapy professionals on the management of cervical cancer and other diseases using brachytherapy

Midterm Review Meeting: Cambodia (Q1, 2026)

Final Review Meeting: Lao P.D.R or Nepal (Q4, 2027)

EM1: TBD (Q2, 2025) **EM2:** TBD (Q2, 2027)

Send delegate to ROM1: TBD (Q4, 2025) **Send delegate to ROM2:** TBD (Q4, 2027)

Outputs

*NwC.GPs: New comer GPs

Design Element	Indicator and Baseline	Target
1 Project Management Team Operational	NPT formed, NWP formulated, NPT meetings held, Periodical reporting completed –baseline 0 as of the start of the project.	All completed as agreed for each time period
2 RO professionals trained on comprehensive management of RT.	No. of RO professional trained in the RTCs – baseline 0	At least 6 per GP (Cambodia, Laos, and Nepal at the moment)
	New RO technique introduced in centers in the NwC. GPs with existing radiotherapy service (Nepal, Cambodia, Laos) – baseline 0	1< per GP
3 Development plan for improvement of RO. access in NwC.GPs devised and presented	No. of formal discussions of future plans of RO with expert missions completed - baseline: 0	2 per NwC.GP
	No. of planning/roadmap documents presented to Ministry of Health of NwC.GPs – baseline 0	1 per NwC.GP
4 Connection with/participation in regional RO community established	Meetings of the delegates of NwC.GPs with representative of the regional RO society implemented through scientific visits - baseline: 0	2 per NwC.GP
	No. of International mentoring relationship b/w radiotherapy centers established - baseline 0	3 (Nepal, Cambodia, Lao)

Next project

Rays of Hope

Rays of Hope Japanese Anchor Center Activity Policy

- Rays of Hope, proposes that Member States support either: .
 - Item (1) establish the first cancer center, or**
 - Item (2) Upgrade cancer centers in member countries with existing infrastructure and capacity;**
- Japan's anchor centers will support **in item (2)**, the establishment or improvement of radiology and regional training in order to clearly strengthen the medical infrastructure and cancer care functions/capabilities in target countries in the Asian region.
- We would like to contribute through our activities, Specifically, by strengthening the use of radiation and nuclear technologies for the advancement of human health, including radiation oncology for cancer treatment, radiation safety, nuclear medicine and diagnostic imaging, dosimetry and medical physics.

IAEA Rays of Hop Japan Anchor Center Organization

General coordinator: Prof. T. Nakano
(RCA National Representative of Japan)

IAEA contact person: Prof. T. Tamaki
(Fukushima Medical University)

16 institutions & Hospitals involved

Nucl.med./Radiol

- **Nucler Medicine/Radiation Diagnosis Network**

Coordinator: Prof. Y. Nakamoto (Kyoto University)

- **Participating institutions: 11 centers**

- Osaka University Grad. Schl .of Med.
- National Cancer Center
- Fujita Health University
- Kagawa University
- Kyoto University
- Hokkaido University
- Tohoku Neuroscience Res. Inst.
- Int. Nat.Univ. of Health & Welfare
- Tohoku Univ. Grad. Schl. Medicine
- Kanazawa University
- Shonan Kamakura Generl Hospital

Rad.Oncol./
Med. Phys.

- **Radiation Oncology and Medical Physics Network**

Coordinator: Prof. T. Tamaki (Fukushima Medical University)

- **Participating institutions and personnel: 5centers**

- National Inst. for Quantum Science and Technology (Direc. M. Wakatsuki)
- Gunma University (Prof. T. Ohno)
- Saitama Medical University (Prof. S. Kato)
- Fukushima Medical University (Prof. Y. Suzuki)
- Cancer Research Foundation (Direc. Y. Yoshioka)

Rays of Hope cooperation activity proposal

1. **Workshop:** of 5 days of lectures on Diag. Imaging/Telemedicine, Radionuclide RT, with a focus on cancer Therp. for technicians, nursing staff, safety manag. staff, and hosp. admin. staff.
2. **Workshop:** on RT of 5-day seminar on ext. beam RT (3DCRT, IMRT, SBRT, etc.), brachy Therp, and particle beam (proton and carbons ions) therapy for ROs and MPs.
3. **Scientific visit:** An academic visit on the practice of cancer treatment in a hospital's RT department, including the daily practice of RT, covering both clinical and quality assurance.
4. **Scientific visit:** Scientific visit regarding cancer treat.practice in the hospital's radiology and nucl. medicine departments, including imaging modalities and quality assessment of manufactured radiopharmaceuticals, cyclotron management, and Rad. protection procedures.
5. **Long-term Education/Training Course:** A long-term education/training course for master's and doctoral degrees aimed at developing cancer care leaders and promoting research activities.
6. **Short-term Training:** Short-term training for any period from one week to two months in essential knowledge and practical skills in RT (EBRT & brachy.) and quality/safety management for medical professionals, including physicians and medical physicists.
7. **Networking Conference:** A network conference to discuss center issues, share experiences and increase autonomy in the management of regional centers for both Nucl. Medicine. or RT
8. **Research Course:** Research course in the development of new radioligands and the conduct of preclinical evaluation.

The signing Ceremony of Designation of IAEA Rays of Hope Anchor Centre and Onchikai Aidu Chuo Hospital's Donation with DG Rafael M. Grossi of the IAEA

2024 March 14th at Fukushima Medical University



Thank you for your attention!

