

December 10, 2020

FNCA Coordinators Meeting and Project Activities in 2020

FNCA Coordinator of Japan
Tomoaki WADA

FNCA Ministerial Level Meeting
In 2020

CDM in 2020

- Formal CDM in 2020 had been scheduled to be held in March this year.
- It was very difficult to assess the impact of the outbreak of the coronavirus pandemic on FNCA project activities and the possibility to hold international project meetings in the member countries because it was in the very early stage of the pandemic.

Impact of COVID-19 on FNCA projects

- The delay of scheduled research in FNCA projects due to stay-at-home and public safety orders caused by the outbreak of COVID-19.
- Possible continuation of international travel restrictions in many member countries in fear of the second surge of COVID-19.
- We held “Ad hoc CDM 2020” in July using e-mails.

Project term and evaluation

The coordination made by **the written procedure of “Ad Hoc Coordinators Meeting 2020”** and its attachment, the e-mail message dated 1 July 2020

- 1) The projects whose duration is to be extended by one year (up to 2021)
 - 1. Radiation Processing & Polymer Modification
 - 2. Research on Climate Change using Nuclear and Isotope Techniques
- 2) The project whose intermediate evaluation is to be extended by one year (in 2021)
 - 3. Mutation Breeding
- 3) The projects which are to start their new phases (from 2021)
 - 4. Radiation Oncology
 - 5. Research Reactor Utilization
 - 6. Radiation Safety & Radioactive Waste Management
 - 7. Nuclear Security & Safeguards
- 4) The new project proposals to be evaluated for adoption (in 2021)
 - 1. Small Module Reactors
 - 2. ¹⁷⁷Lutetium- Labeled PSMA radionuclide therapy for metastatic prostate cancer

Seven Project Activities in 2020-21

- Hold online meetings, using e-mails or video conferencing, mainly focusing on information exchange.
 1. “Mutation Breeding” project
 - Online meetings were held in November
 2. “Radiation Processing and Polymer Modification” project
 - An online video meeting was held in October
 3. “Research on Climate Change” project
 - A video meeting was held in November and the progress, roadblocks, and international collaborations were discussed
 4. “Radiation Oncology” project
 - A video meeting was held in November
 5. “Research Reactor Utilization” project
 - An online meeting will be held in December
 6. “Radiation Safety and Radioactive Waste Management” project
 - An online meeting will be held in December
 7. “Nuclear Security and Safeguards” project
 - A web meeting is planned to be held in February 2021

Remarkable Achievements in 2020

Cervix-V

- To determine the safety and efficacy of IGBT for patients with locally advanced cervical cancer in FNCA countries.

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Journal of Radiation Research OXFORD

Preliminary survey of 3D image-guided brachytherapy for cervical cancer at representative hospitals in Asian countries

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ABSTRACT

3D image-guided brachytherapy (3D-IGBT) has become a standard therapy for cervical cancer. However, the use of 3D-IGBT is limited in East and Southeast Asia. This study aimed to clarify the current usage patterns of 3D-IGBT for cervical cancer in East and Southeast Asia. A questionnaire-based survey was performed in 11 countries within the framework of the Forum for Nuclear Cooperation in Asia. The questionnaire collected the treatment information of patients with cervical cancer who underwent 3D-IGBT. The cumulative external beam radiotherapy and 3D-IGBT doses were summarized and normalized to a biological equivalent dose of 2 Gy per fraction (EQD₂) using a linear-quadratic model. Of the 11 institutions representing the participating countries, six (55%) responded to the questionnaire. Overall, data of 36 patients were collected from the six institutions. Twenty-one patients underwent whole-pelvic irradiation and 15 underwent whole-pelvic irradiation with central shielding. Patients received a median of four treatment sessions of 3D-IGBT (range, 2–6). All 3D-IGBT sessions were computed tomography (CT)-based and not magnetic resonance image-based. The median doses to the high-risk clinical target volumes D₁₀₀, bladder D₁₀₀,

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Registered patients

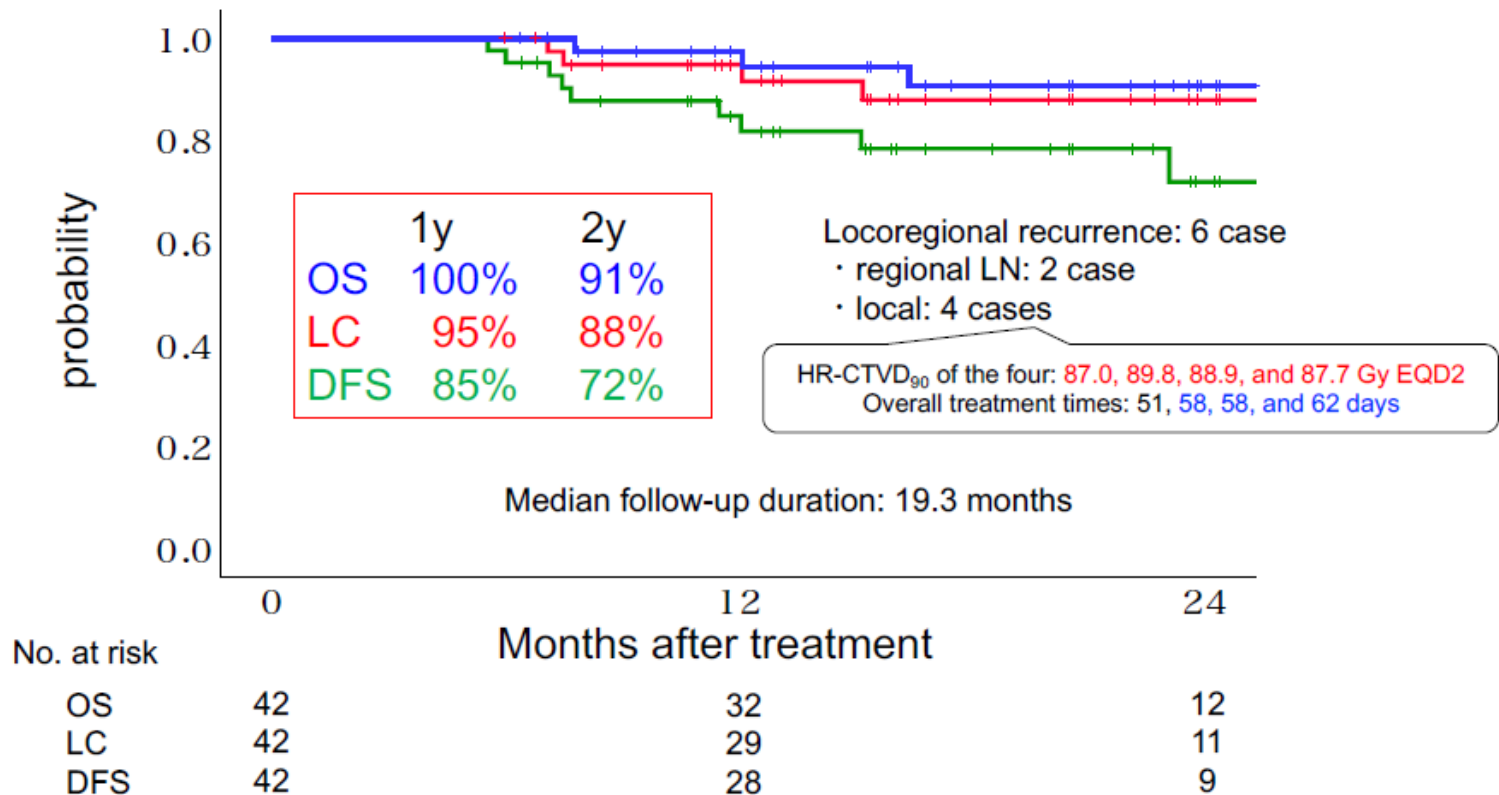
Patient accrual: 2017.5-2020.11 total 60 cases



Patients enrollment to Cervix-5 in your institution can be started after the approval of IRB in each institution.

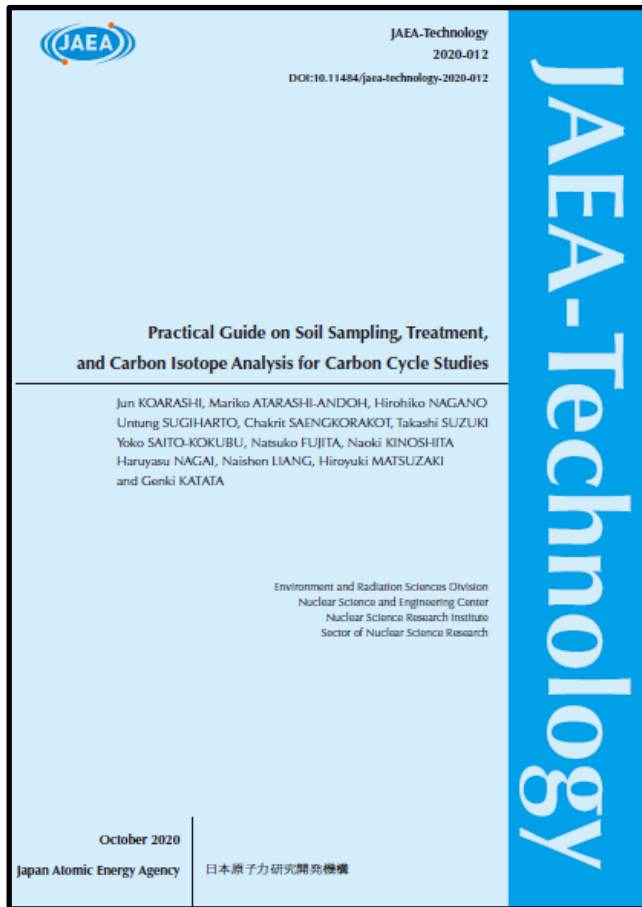
Preliminary Results of Cervix-V

Local control, Overall survival, Disease-free survival (n = 42)



cf. FNCA Cervix-III (n = 120) (Conventional brachy)
 OS 79.6%(2 years)

“Practical Guide on Soil Sampling, Treatment, and Carbon Isotope Analysis for Carbon Cycle Studies” has been compiled in October 2020.



- This method will be applied to different forest sites (mangrove forests, etc.) in Asian region.
- Asian-scale database of soil organic carbon degradability will be constructed.
- Finally, the database will be provided to the climate change research community for improving predictions of long-term response of soil carbon to global warming.

Field researches, including selection of suitable areas for soil sampling provided for climatic, landscape and other natural peculiarities in Kazakhstan

Collaboration with the ISTC



The Project Proposal KZ-2611 - Revealing climate change and impact of man-made factors on contamination of the natural environment by studying radiocarbon concentration in the earth crust of the forest ecosystems of Kazakhstan

Foreign collaborators




**Japan Atomic
Energy Agency**

Aim of this project is to determine the level of climate change in the environment of Kazakhstan and the degree of impact of human activities to this change.

Tasks:



1. Development of a technique for soil samples collection and preparation for ^{14}C research.
2. Field researches, including selection of suitable areas for soil sampling provided for climate, landscape and other natural peculiarities.
3. Laboratory researches for determining ^{14}C concentration in soil samples, structure and physical and chemical properties of soil, concentration of radioactive substances in soil samples.
4. Processing, analysis and interpretation of the data obtained.

BATAN's Animal Feed Project -Superior Local Chicken Strains Development- has been adopted as National Research Priorities in Indonesia



**#INOVASI
INDONESIA**

**Nasional Research Priorities (NRP)
2020-2024**

lembaga pengelola dana pendidikan
batan


Key Technology : Modern Biotechnology for the Formation of Superior Local Chicken Strains and Supporting Technology for High Productivity and Disease Resistance

Target : 2024 Candidates for Superior Local Chicken Seeds with Egg Production $\geq 60\%$ and Body Weight ≥ 1 kg (Age 10 weeks)

Coordinator : Balitbangtan
Implementer: Balitbangtan, BATAN, BPPT, IPB, UGM, UNAIR, UNHAS, UMM, PT Carpifarmindo, Pusvetma, UD Citra Lestari Farm, PT Widodo Makmur Unggas, PT Sumber Unggas Indonesia, PT CIRIL

20 21 22 23 24

Superior Local Chicken Seeds with Superior Production and Disease Resistance (Balitbangtan, IPB, UGM, UNHAS, UMM, UD Citra Lestari Farm, PT Widodo Makmur Unggas, PT Sumber Unggas Indonesia, PT CIRIL)




20 21 22 23 24

Development of Selection Markers for Production Traits and Disease Resistance (Balitbangtan, IPB)

20 21 22 23 24

Development of ILT Vaccines and HVT-IBD-ND recombinant vaccines (Balitbangtan, PT Carpifarmindo, Pusvetma)



20 21 22 23 24

Ration formulations for local chickens based on local feed ingredients and feed additives (Balitbangtan, IPB, Unair, **BATAN**, PT CIRIL)

20 21 22 23

Utilization of Tocopherol and Selenium to Improve Semen Quality and Development of DOC Sexing Methods in Local Chickens (Balitbangtan)

20 21 22 23 24

Development of Android-Based Chicken Disease Control and Prevention Applications and Poultry Feed Formulations (Balitbangtan, BPPT)

20 21 22 23 24

Quality Standards of Local Chicken Carcass and Meat (UGM)

BATAN IDR 168 Million or USD 11,450 (for the first year)

Mutant lines of rice in Malaysia survived after flash flood strike in April 2020

**Flash flood in Sep 2020 !!!!!
Sekinchan, Selangor.**

Farmer name: Mr Murshidul Hafid bin Ahmad
Hp no : +6 019 255 8214

Results for 2020

Other farmer variety stunted after flash flood



NMR152 Adapted well after flash flood.

5 Days Submerge

NMR 152 suitable for Climate Change

**Flash flood in April 2020 !!
Chen Balai ,Perak.**

8 Days Submerge



Farmer name: Mr Jaafar Aziz
Hp no : +6 019 295 4203

Interim Report on Low Level Radioactive Repositories (March 2020)

	<p>FNCA Forum for Nuclear Cooperation in Asia</p>	
<p>FNCA Consolidated Report on Low Level Radioactive Waste Repository (Interim Report)</p>		<p style="text-align: center;">CONTENTS</p> <p>PREFACE i Framework of Regional Cooperation under FNCA ii AUSTRALIA -Part I. General Outline of LLW Repository- 1 -Part II. Specific Site Safety Assessment of LLW Repository- 10 BANGLADESH -Part I. General Outline of LLW Repository- 18 -Part II. Specific Site Safety Assessment of LLW Repository- 22 CHINA -Part I. General Outline of LLW Repository- 27 -Part II. Specific Site Safety Assessment of LLW Repository- 35 INDONESIA -Part I. General Outline of LLW Repository- 43 -Part II. Specific Site Safety Assessment of LLW Repository- 54 JAPAN -Part I. General Outline of LLW Repository- 64 -Part II. Specific Site Safety Assessment of LLW Repository- 77 KAZAKHSTAN -Part I. General Outline of LLW Repository- 92 -Part II. Specific Site Safety Assessment of LLW Repository- 109 MALAYSIA -Part I. General Outline of LLW Repository- 120 -Part II. Specific Site Safety Assessment of LLW Repository- 128 MONGOLIA -Part I. General Outline of LLW Repository- 135 THE PHILIPPINES -Part I. General Outline of LLW Repository- 141 -Part II. Specific Site Safety Assessment of LLW Repository- 144 THAILAND -Part I. General Outline of LLW Repository- 147 -Part II. Specific Site Safety Assessment of LLW Repository- 159 VIETNAM -Part I. General Outline of LLW Repository- 163 RECENT ACTIVITIES 168 CONTRIBUTORS 169</p>
<p>March 2020</p>	<p>Radiation Safety and Radioactive Waste Management Group, Forum for Nuclear Cooperation in Asia (FNCA)</p>	

2021 Workshop

- In 2020, due to the coronavirus pandemic in almost all FNCA member countries;
 - Working hours or working days have been limited,
 - Research work involving field study or movement of people has been precluded,
 - Radiation oncologists and radiation technologists have been infected with COVID-19 in hard-hit countries.
- In 2021, We would like to hold a face-to-face regular workshop meeting in the latter half of next year.
 - Vaccines will be available in many countries,
 - Preventive measures against coronavirus infection will be better organized in each country,
 - International travel restrictions will be more eased.
- We would like to decide the venues of project workshops by July 2021.

**THANK YOU
FOR
YOUR ATTENTION**