【General Session】

April 13 (Thu.)　　PACIFICO Yokohama Conference Center　418

1. Radiation Therapy (photon/electron) 1 (IMRT/VMAT1)　　　13:00–13:50　　Moderator: Yukio Fujita

★ **O-001**　Dose error prediction based on the dose uncertainty accumulation of intensity-modulated radiation therapy

Hospital of UOEH　　　Eiji Shiba

O-002　Evaluation of dosimatric impact of the jaw position displacement in jaw tracking VMAT

Juntendo Univ.　　　Toru Kawabata

★ **O-003**　PHITS Monte Carlo-dose verification of VMAT treatment plan with HD120MLC

Kumamoto Univ.　　　Naoki Nagaishi

O-004　Statistical analysis of patient-specific IMRT quality assurance

Ryukyus Univ.　　　Masashi Kinjyo

O-005　Feasibility study of transferring patients to a matched linear accelerator in case of machine breakdown in IMRT and VMAT plans

NCCHE　　Hidenobu Tachibana

2. Radiation Therapy (photon/electron) 2 (IMRT/VMAT2)　　　14:00–15:00　　Moderator: Seiichi Ota

★ **O-007**　Comparison of VMAT and 3-D CRT treatment plans in multiple brain metastases

Kumamoto Univ.　　　Naoto Yamaura

★ **O-008**　Dosimetric accuracy of dose calculation algorithms for VMAT in multiple brain metastases

Kumamoto Univ.　　　Kento Hoshida

O-009　Impact of different MLC controls in volumetric modulated arc therapy for total body irradiation (VMAT-TBI)

Tokyo Metropolitan Univ.　　　Yuta Takahashi

O-010　The analysis of the effect of implanted metal in spine for Volumetric Modulated Arc Therapy

Osaka Univ.　　　Reimi Taniguchi

★ **O-011**　Comparison of 3D CRT and the Jaws-Only IMRT (JO-IMRT) planning parameters for head-and-neck cancer

Dong Nai Hosp.　　　Tai Duong Thanh

★ **O-012**　Evaluation of Jaws-Only Intensity Modulated Radiation Therapy Treatment Plans using Octavious 4D System

Dong Nai Hosp.　　　Tai Duong Thanh

3. Radiation Therapy (photon/electron) 3 (IMRT/VMAT3)

15:10–16:10　　　Moderator: Akihisa Wakita

O-013　The model-based estimation of rectal dose in volume modulated arc radiotherapy for prostate cancer

OMCC　　　Yoshihiro Ueda

★ **O-014**　Quantitative analysis for coldspots in dose distributions of IMRT for prostate cancer

Univ. of Kyushu.　　　Ryosuke Asamura

★ **O-015**　Impact of shape variation on PTV margins in IMRT for prostate cancer

Kyushu Univ. Hosp.　　　Takaaki Hirose

★ **O-016**　Planning study for esophageal cancer: A dosimetric comparison of conformal radiotherapy, VMAT and Hybrid-VMAT

OMCC　　Masayoshi Miyazaki

★ **O-017**　Advantage of FFF beam compared to FF beam for VMAT-SBRT plans in lung tumor

Kumamoto Univ.　　　Naoto Yamaura

★ **O-018**　A comparison between dose calculation algorithms for VMAT-SBRT plans in lung tumor

Kumamoto Univ　　Takanori Matsuoka

4. Radiation Therapy (photon/electron) 4 (Respiratory Gating and Tracking Technique)
　　　　　　　　　　　　　　　　　　　　　　　16:10–17:00　　　　　Moderator: Shuichi Ozawa

O-019　Basic study of respiratory gated irradiation using FFF beam

　　　　　　　　　　　　　　　　　　　　Toho Univ. Sakura Medical Center　　　Teruo Ito

O-020　A simple quality assurance system for respiratory-gated radiotherapy using pulse information from linac

　　　　　　　　　　　　　　　　　　　　　　Komazawa Univ.　Tomoyuki Kurosawa

O-021　Assessment of tracking accuracy by detecting laser position using CMOS camera in CyberKnife

　　　　　　　　　　　　　　　　　　　　　　　　　NCCH　　Hiroyuki Okamoto

O-022　Investigation of uncertainty in 4D dose accumulation for lung SBRT

　　　　　　　　　　　　　　　　　　　　　　Tohoku Univ.　　　Ryutaro Ikeda

O-023　Design and development of a non-rigid phantom that ventilates air for the quantitative evaluation of CT-based pulmonary ventilation imaging

　　　　　　　　　　　　　　　　　　　　　　Komazawa Univ.　　　Shin Miyakawa

5. Medical Image and Information　　　　　　　　17:10–17:50　　　　Moderator: Atsushi Myojoyama

O-024　Automatic chest X-ray screening with a deep neural network

　　　　　　　　　　　　　　　　　　　　　　Teikyo Univ.　　　Junichi Kotoku

O-025　Development of patient recognition system for radiotherapy

　　　　　　　　　　　　　　　　　　　　Tokyo Metropolitan Univ.　　　Takatomo Ezura

★ **O-026**　A feasibility study for analyzing abnormal motion using relative cross correlation in tracking moving tumors in radiation therapy

　　　　　　　　　　　　　　　　　　　　The Univ. of Tokyo　Ritu Bhusal Chhatkuli

★ **O-027**　Investigation of the correlation in radiomics features between EPID and digitally reconstructed radiography images

　　　　　　　　　　　　　　　　　　　　　　Kyushu Univ.　　　Mazen Soufi

April 13 (Thu.)　　PACIFICO Yokohama Conference Center　419

6. Radiation Therapy (particle) 1 (Measurement)　　13:00–14:00　　Moderator: Toshiyuki Toshito

O-028　Time-resolved analysis of Cherenkov light from positron emitter as a new probe to high-precision measurement of nuclear reaction cross section

　　　　　　　　　　　　　　　　　　　　　　Waseda Univ.　　Takamitsu Masuda

O-029　Luminescence imaging of water during carbon-ion irradiation

　　　　　　　　　　　　　　　　　　　　　　Nagoya Univ.　　Seiichi Yamamoto

O-030　Relationship between Luminescence Images and Dose Distributions in Water for Therapeutic Proton Beam

　　　　　　　　　　　　　　　　　　　　　　Nagoya Univ.　　　Takuya Yabe

O-031　Development of a low-energy X-ray camera for beam monitoring of particle therapy

　　　　　　　　　　　　　　　　　　　　　　Nagoya Univ.　　　Kouki Ando

O-032　Measurement of radiation quality of Pencil Carbon Ion Beams using a Silicon Detector

　　　　　　　　　　　　　　　　　　　　　　Gunma Univ.　　　Kohei Osaki

O-033　Proposal for dosimetry system using e^{+}/e^{-} pair production events

　　　　　　　　　　　　　　　　　　　　　　Chiba Univ.　　　Shota Kimura

7. Radiation Therapy (particle) 2 (QA)　　　14:00–14:40　　　Moderator: Hideyuki Mizuno

O-034　Commissioning of the small-field and large-field proton beams in line scanning therapy for the Eclipse Proton treatment planning system

Aizawa Hosp.　　　Yuya Sugama

O-035　Development of an online proton dose distribution monitoring system by using a fluorescent screen (I)

The Wakasa Wan Energy Research Center　　　Fuyumi Ito

O-036　Testing a ZnS:Ag scintillator as a QA tool for small-field carbon ion therapy

Kitasato Univ.　　Takumi Narusawa

★ **O-037**　Time saving lateral profile validation procedure utilizing simplified Monte Carlo calculation for patient specific QA of proton beam therapy

Hitachi Ltd.　　Takahiro Yamada

8. Nuclear Medicine 1　　　14:50–15:50　　　Moderator: Masayori Ishikawa

★ **O-038**　Whole gamma imaging concept: feasibility study of triple-gamma imaging

QST/NIRS　　　Taiga Yamaya

O-039　Whole gamma imaging concept: Compton-PET imaging simulation for positron emitters

Chiba Univ.　　　Yusuke Okumura

O-040　Development of whole-body PET system with 3 mm resolution and 1M$

Chiba Univ.　　　Kento Fujihara

O-041　Development of gamma-detectors for PET with position resolution of 0.5mm

Chiba Univ.　　　Yusaku Emoto

O-042　Development of a circular shape Si-PM-based detector ring for positron emission mammography (PEM) system

Nagoya Univ.　　Kouhei Nakanishi

O-043　Development of second add-on PET/MRI prototype: Evaluation of PET imaging performance

QST/NIRS　　Fumihiko Nishikido

9. Nuclear Medicine 2　　　15:50–16:50　　　Moderator: Hideaki Tashima

O-044　Development of a head motion tracking system for the helmet PET

QST/NIRS　　　Yuma Iwao

O-045　Development of Monte Carlo Simulation Built-in Quantitative Iterative Reconstruction

Kindai Univ. Hosp.　　Kenta Sakaguchi

O-046　Study on the cause of edge artifact in PSF-based image reconstruction and its mitigation by Map-EM method with L1 regularization

Tokyo Metropolitan Univ.　　Hiroyuki Shinohara

★ **O-047**　Joint estimation of activity and attenuation for a compact brain TOF-PET system : a simulation study

Tokyo Institute of Technology　　　Risako Tanaka

★ **O-048**　Separation of two radionuclides in small animal SPECT system

Hosei Univ.　　Shunsuke Shimodaira

★ **O-049**　Multi-pinhole imaging with a triple head SPECT system

Hosei Univ.　　　Hayao Kubota

10. Nuclear Medicine 3　　　17:00–18:10　　　Moderator: Tomoyuki Hasegawa

★ **O-050**　Development of a four-layered DOI-PET detector with quadrisected crystals on the top layer

Chiba Univ.　　　Genki Hirumi

★ **O-051**　Development of an isotropic DOI detector based on two-sided photon readout

QST/NIRS　　Akram Mohammadi

★ **O-052**　Comparison of yttrium-90 Compton image, SPECT, and PET

Gunma Univ.　　　Makoto Sakai

★ **O-053**　Simulation study on parallel plane PET based positron marker tracking with a volume of response algorithm

Hokkaido Univ.　　　Ryo Ogawara

★ **O-054**　Development of a small prototype system toward real-time OpenPET image-guided surgery

QST/NIRS　　　Hideaki Tashima

★ **O-055**　CALCULATING ABSORBED DOSE IN THYROID DISEASE TREATMENT BY I-131, USING OLINDA/ EXM.

Nguyen Huu Huan high school　　Nguyen Thi Phuong Thao

★ **O-056**　USING CARIMAS TO DETERMINE THE DISTRIBUTION OF RADIATION ACTIVITY IN PATIENTS FROM PET IMAGES

Nguyen Huu Huan high school　　Nguyen Thi Phuong Thao

April 14 (Fri.)　　PACIFICO Yokohama Conference Center　418

11. Radiation Therapy (photon/electron) 5 (Treatment Planning and QA 1)
9:10–10:10　　　　Moderator: Takeshi Kamomae

O-057　VMAT QA using MapCHECK2 and original phantom

Tatebayashi Kosei Hosp.　　　Ayaka Shinohara

★ **O-058**　Evaluation of MLC error sensitivity for VMAT QA: a comparison of various QA devices and metrics

The Univ. of Yamanashi　　　Masahide Saito

O-059　Study of the difference in inhomogeneity correction of the treatment planning system and the gantry-mounted 3-dimensional detector

Seirei Hamamatsu General Hosp.　　　Yumiko Adachi

O-060　Design and Development of a new Clarkson method that accounts for lateral scatter in inhomogeneous media

Komazawa Univ.　　　Shunta Jinno

★ **O-061**　Optimal Control Point for Practical Dose Calculation with AXB Algorithm in Lung Stereotactic Body Radiation Therapy

Chulalongkorn Univ.　　Lukkana Apipunyasopon

O-062　Acceleration of the photon transport simulation by voxel-based Boltzmann transport calculation method using parallel computing

Tokyo Metropolitan Univ.　　　Takahito Chiba

12. Radiation Therapy (photon/electron) 6 (Treatment Planning and QA 2)
10:20–11:20　　　　Moderator: Satoru Sugimoto

★ **O-063**　Computer-assisted treatment planning approach with genetic algorithm-based optimization using similar cases for lung stereotactic body radiation therapy

Univ. of Kyushu.　　　Shu Haseai

O-064　Assessment of adaptive radiation therapy with deformable image registration software

Kobe Univ.　　Naritoshi Mukumoto

O-065　Investigation to improve dose distribution by adjusting the beam parameters based on the dose calculation during a course of radiotherapy

Tohoku Univ.　　　Suguru Dobashi

★ **O-066** The automated contouring framework of clinical target volumes based on the Bayesian inference for a prostate cancer radiation therapy

<div align="right">Univ. of Kyushu.   Kenta Ninomiya</div>

O-067 A concept for evaluation of time-variable dose-volume evaluating on the time-dose-volume manifold

<div align="right">Osaka Univ.   Yusuke Anetai</div>

O-068 Evaluation of oxygen enhancement ratio (OER) derived from cell survival curves

<div align="right">Hokkaido Univ.   Ryota Yamada</div>

13. Radiation Therapy (photon/electron) 7 (QA 1)　　14:40–15:40　　　Moderator: Keisuke Usui

★ **O-069** Assessment of delivery accuracy of Dynamic WaveArc technique using dose reconstruction method

<div align="right">Kyoto Univ.   Hideaki Hirashima</div>

★ **O-070** The shift of the effective point of measurement and displacement perturbation factor at cylindrical chambers in high energy Photon beams

<div align="right">Gono Bishwabidyalay (Univ.)   Paul Kumaresh Chandra</div>

O-071 A source model for Monte Carlo dose calculation with the multi-point scattered model

<div align="right">Tohoku Univ.   Yoshiki Ishizawa</div>

O-072 Comparison of measured Synergy and Infinity linear accelerators: multi-institutional study

<div align="right">Suita Tokushukai Hospital   Yuichi Akino</div>

O-073 Consideration on the control of output dose in radiation therapy equipment

<div align="right">Iwate prefectural Isawa Hosp.   Koji Ishita</div>

O-074 The analysis of multi-institutional beam data of Clinac iX & Novalis Tx linear accelerators

<div align="right">OMCC   Masaru Isono</div>

14. Radiation Therapy (photon/electron) 8 (QA 2)　　15:50–16:50　　　Moderator: Yu Kumazaki

O-075 Comparison of machine log-file and machine log-file with EPID image dose reconstruction methods using two commercial software programs

<div align="right">Tohoku Univ.   Yoshio Kon</div>

O-076 Improvement of dose analysis method using dose gradient information

<div align="right">Hokkaido Univ.   Masayori Ishikawa</div>

O-077 Fundamental study on pass rate change induced by various resolutions for film-based dose distribution analysis

<div align="right">Hokkaido Univ.   Isshi Nara</div>

★ **O-078** Performance evaluation of TLD sheet toward the dosimetry in the build-up region

<div align="right">Hiroshima Univ.   Tatsuhiko Suzuki</div>

O-079 Testing plastic scintillator disk for verification of the electron boost plan in breast cancer patients

<div align="right">Kitasato Univ.   Yuya Tatsuno</div>

O-080 Measurement of an energy spectrum of linear accelerator using UVC camera

<div align="right">Tokyo Metropolitan Univ   Kyohei Morita</div>

April 14 (Fri.)　　　PACIFICO Yokohama Conference Center　419

15. Diagnostic Imaging 1 (X-Ray/CT 1)　　　　9:10–10:00　　　　　Moderator: Shinji Abe

O-081 Imaging properties of the digital mammography using pixelated-scintillator

<div align="right">Osaka Univ.   Masao Matsumoto</div>

★ **O-082** Simulation study for effective reduction procedure of scattered X-rays toward high accuracy material identification based on photon counting technique

<div align="right">Tokushima Univ.   Takashi Asahara</div>

O-083　Investigation of 940nm near-infrared-ray computed tomography scanner

Iwate Medical Univ. Hosp.　　　　Yuichi Sato

O-084　Novel photon-counting low-dose computed tomography using a multi-pixel photon counter (2)

Waseda Univ.　　　Tsubasa Oshima

★ O-085　Measurement of X-ray spectra using an LSO-small-photomultiplier detector and its application to quad-energy computed tomography

Iwate Medical Univ.　　Satoshi Yamaguchi

16. Diagnostic Imaging 2 (X-Ray/CT 2)　　　10:00–10:50　　　Moderator: Shinichi Wada

O-086　Characteristics of a high-spatial-resolution dual cadmium-telluride-array detector and X-ray imaging

Iwate Medical Univ.　　　　Eiichi Sato

O-087　Image-quality improvement of quad-energy X-ray computed tomography using a readily available cadmium telluride detector

Iwate Medical Univ.　　　　Yasuyuki Oda

O-088　Effect of the number of MDCT scanning detector rows on image quality

Ryukyus Univ.　　Takahiro Fujimoto

★ O-089　Usefulness of Combined Interpolation Method for Metal Artifact Reduction in Head and Neck Computed Tomography

Miyagi Cancer Center　　　　Akira Ito

O-090　Image quality of virtual monochromatic imaging in dual-energy CT for detection of acute ischemic stroke

Kitasato Univ.　　　　Hidetake Hara

17. Radiation Protection　　　11:00–11:50　　　Moderator: Hiroki Ohtani

O-091　The protective effect of amino acids against plasmid DNA damage induced by X-ray irradiation

Kitasato Univ.　　　　Kouhei Kamada

O-092　Study of generalization of X-ray CT sources for Monte Carlo calculation.

QST/NIRS　　　　Yusuke Koba

O-093　Search for Reasons of Incidence of Lung Cancers by Measurement of Environmental Radiation based on Cherenkov Detection

Chiba Univ.　　　　Hiroshi Ito

★ O-094　Medical physicist's challenges in Nepal in absence of rules and regulations

Bir Hosp.　　Adhikari Kanchan P.

★ O-095　A space engineering application of therapeutic broad proton beam for a cosmic ray simulation

WERC　　　Kyo Kume

18. Radiation Therapy (particle) 3 (Positioning)　　　14:40–15:30　　　Moderator: Taeko Matsuura

O-096　Comparison between current and advanced technique in image guidance for proton beam therapy in lung

Univ. of Tsukuba　　　Shunsuke Moriya

O-097　The positioning precision of In-room CT image-guided system in proton therapy facility and the first application to prostate cancer treatment.

Fukui Prefectural Hosp.　　　Yoshikazu Maeda

★ O-098　Predicting Interfractional Motion in Carbon Ion Radiation Therapy from CBCT-Based Bayesian Statistics

Gunma Univ.　　Daniel S. Bridges

★ O-099　Analysis software to evaluate deviation of water-equivalent thickness along proton beam path between Plan CT and CBCT for proton therapy

Hokkaido Univ.　　　Takaaki Fujii

★ **O-100** Development of a Carbon-Knife system: Patient positioning and fixation system

Gunma Univ.   Keawsamur Mintra

19. Radiation Therapy (particle) 4 (Treatment Planning)

15:40–16:30   Moderator: Yoshikazu Maeda

O-101 Calculation of water equivalent ratio of metal materials in patient body in carbon ion radiotherapy

SAGA HIMAT   Genyu Kakiuchi

O-102 Revision of calibration method for CT-number to stopping-power ratio conversion in treatment planning of particle radiotherapy

QST/NIRS Hosp.   Nobuyuki Kanematsu

★ **O-103** Beam angle optimization incorporating anatomical heterogeneities for pencil beam scanning charged-particle therapy in head and neck cancer

Tokyo Women's Med. Univ.   Chie Toramatsu

O-104 Geometrical low-dose-gradient junctioning technique for spot scanning proton beam therapy

Nagoya Proton Therapy Center   Toshiyuki Toshito

O-105 A dosimetric evaluation method with setup, range and radiosensitivity uncertainties in fractionated carbon-ion therapy

QST/NIRS   Makoto Sakama

April 15 (Sat.)   PACIFICO Yokohama Conference Center   418

20. Radiation Therapy (particle) 5 (BNCT, Other)   9:10–10:00   Moderator: Shunsuke Yonai

O-106 Development of remote-changeable Bonner-sphere spectrometer for characteristic estimation in neutron irradiation field for BNCT

KURRI   Yoshinori Sakurai

O-107 Dosimetric impact due to intratreatment positioning error in boron neutron capture therapy for the high-grade glioma

STBRC   Takahiro Kato

O-108 Development of a new production method for patient immobilization implement by combination with 3D Printing technique for BNCT

Univ. of Tsukuba   Hiroaki Kumada

O-109 An Approach for BNCT to be a General Radiation Therapy

K2BNCT Science & Engineering Laboratory   Tooru Kobayashi

★ **O-110** An application of microdosimetric kinetic model to targeted radionuclide therapy

Gunma Univ.   Yoshiyuki Hirano

21. Radiation Therapy (photon/electron) 9 (CBCT and SBRT)

10:00–11:00   Moderator: Akihiro Haga

O-111 Feasibility study on a new approach to make CT to electron density conversion table for CBCT-based dose calculation

Keiyukai Sapporo Hosp.   Yuta Kobayashi

O-112 Image quality improvement in cone-beam CT using super-resolution technique

Teikyo Univ.   Asuka Oyama

★ **O-113** Estimating target position from orthogonal cone-beam CT projections by dual-source kV X-ray imaging system with extracorporeal infrared marker

Kyoto Univ.   Hiraku Iramina

O-114 Improving the imaging of thoracic tumors using four-dimensional cone-beam CT with combined shared projection data

Juntendo Univ. Keisuke Usui

★ **O-115** Computational analysis of rectum translation variability in prostate cancer radiation therapy

Kyushu Univ. Mohammad Haekal

★ **O-116** Process of stereotactic body radiation therapy for liver cancer at hue central hospital.

Hue Central Hosp. Le Trong Hung

22. Meidcal Physics Education　　　　　11:00–11:20　　　　　Moderator: Hiraku Fuse

★ **O-117** Medical Physics in Bangladesh: Education and Profession

Ahsania Mission Cancer and General Hospital Md Akhtaruzzaman

O-118 Educational outcomes of a medical physicist program in Japan for past ten years with "Ganpro"

Tohoku Univ. Noriyuki Kadoya

23. Magnetic Resonance 1 (Function and Device)　　15:10–15:40　　　　Moderator: Toru Yamamoto

★ **O-119** Reproducibility of the Asymptotic Analysis in Intravoxel Incoherent Motion MRI

Kyoto Univ. Yenpeng Liao

★ **O-120** Arteriolar vasomotor function obtained from spectral analysis of MR signal fluctuation in human brain: deterioration by normal aging

Hokkaido Univ. Minghui Tang

O-121 Development of small-sized dielectric pads for improved RF field homogeneity in MR imaging of the brain at 7T

NICT Takashi Ueguchi

24. Magnetic Resonance 2 (Compressed Sensing)　　15:40–16:10　　　Moderator: Seiji Kumazawa

O-123 Study on the quantitative accuracy of three-dimensional brain MRI using compressed sensing

Tokyo Metropolitan Univ. Hiroyuki Shinohara

★ **O-124** Optimization of random sampling for compressed sensing MRI

Kyorin Univ. Ryutaro Kawamura

★ **O-125** The development of the random sampling method using the Hermitian symmetry for compressed sensing MRI

Kyorin Univ. Takeyuki Hashimoto

25. Magnetic Resonance 3 (Contrast)　　　　16:20–17:00　　　　Moderator: Masahiro Umeda

O-126 Enhancement of the transverse relaxation time shortening effect by oxygen molecules in viscous solution with cellular diffusivity

Hokkaido Univ. Masayuki Taguchi

O-127 Gadolinium contrast agent enhances longitudinal relaxation rate strongly in solution with intracellular viscosity

Teine Keijinkai Hosp. Ken Masuyama

O-128 Cancerous-region enhancement utilizing gadolinium-oxide nanoparticles and 7.0-T magnetic resonance imaging

Iwate Medical Univ. Eiichi Sato

O-129 Development of a text-data based learning tool simulating the contrast of MR image

Tokyo Metropolitan Univ. Hiroyuki Shinohara

April 16 (Sun.)　　PACIFICO Yokohama Conference Center　418

26. Brachytherapy　　　　　　　　　　9:10–10:10　　　　Moderator: Takashi Hanada

O-130　Development of an independent verification method using DICOM RT Plan in gynecology brachytherapy

Chiba Univ.　Yoshinobu Furuyama

O-131　Novel dosimetric measurement using RGD for HDR Brachytherapy with 3D printed deformable female pelvis phantom

Tohoku Univ.　Kota Abe

O-132　Development and principle verification for the total three-dimensional end-to-end evaluation system in brachytherapy

Tokai Univ. Hosp.　Tomoko Kikuchi

★ **O-133**　A simple method for verification of HDR brachytherapy source position inside applicators using an electron beam from a linear accelerator

Ryukyus Univ.　Yasumasa Kakinohana

★ **O-134**　Monte Carlo simulations analysis of dosimetric impacts of titanium applicator and tissue inhomogeneity for cervical intracavitary brachytherapy

Kyushu Univ.　Tran Thi Thao Nguyen

★ **O-164**　External beam radiotherapy and high dose rate brachytherapy treatment for carcinoma cervix in cancer hospital

B.P.Koirala memorial cancer Hosp.　Chaurasia Pradumna Prasad

27. Radiation Measurement 1 (Neutron)　　　10:10–10:50　Moderator: Yuzuru Kutsutani-Nakamura

★ **O-135**　A comparison of generating properties of ^{128}I and ^{134m}Cs in a self-activated CsI scintillator for different energy neutron fields

Univ. of Kyushu.　Ryo Kakino

O-136　Fundamental study of a simple neutron-distribution measurement method by the self-activation of CsI plates using a CCD camera

Univ. of Kyushu.　Masaaki Tokunaga

O-137　A design study of a handy neutron spectrometer for BNCT QA procedures

Univ. of Kyushu.　Ryosuke Kurihara

O-138　Optical photon transport simulation with GEANT4 for the paired SOF detector improvement

Hokkaido Univ.　Yuki Murayama

28. Radiation Measurement 2 (Solidstate Detector)　　13:00–13:50　　　　Moderator: Kyo Kume

O-139　Development of a compact dosimeter using a silicon X-ray diode and a long USB cable

Iwate Medical Univ.　Michiaki Sagae

★ **O-140**　Development of a semiconductor dosimeter for radiation therapy using a microminiature substrate

Iwate Medical Univ.　Satoshi Yamaguchi

★ **O-141**　Evaluation of two-dimensional dosimetry using Al_2O_3 thermoluminescence slabs for robotic radiosurgery

Tokyo Metropolitan Univ.　Shin Yanagisawa

★ **O-142**　Feasibility study of CBCT dose measurements with tissue-equivalent thermoluminescense sheet

Juntendo Univ.　Chie Kurokawa

O-143　A sensitivity calibration of radiophotoluminescent glass dosimeter for scattered therapeutic x-ray in water equivalent phantom

Nagoya Univ.　Shouichi Yokose

29. Radiation Measurement 3 (Ion Chamber and Dosimetry)

14:00–15:00   Moderator: Toru Kawachi

O-144 Characteristics of liquid ionization chamber for photon and electron beams

Univ. of Tsukuba Hosp.   Hideyuki Takei

O-145 Humidity effect of a free air type ionization chamber

Komazawa Univ.   Yuuki Sato

O-146 Study of uncertainty in positioning ionization chamber at reference depth for various water phantoms

Fukui Univ. Hosp.   Naoki Kinoshita

O-147 Kilovoltage x-ray beam dosimetry using a 0.6 cc ionization chamber with a $N_{D,w}$

The National Cancer Center   Yukihiro Uchida

★ **O-148** New dosimetry based on ^{60}Co absorbed dose-to-water calibration in diagnostic x-ray beams

Kumamoto Univ.   Suzuna Umeno

O-149 An Ion chamber calibration by the ionization current measurement in a high-energy photon beam from a clinical linac

Komazawa Univ.   Ken Hirayama

April 16 (Sun.)   PACIFICO Yokohama Conference Center   419

30. Radiation Therapy (particle) 6 (Biological Dose)   9:10–10:00   Moderator: Makoto Sakama

★ **O-150** The effect of the oxygen enhancement ratio on clinical dose in carbon ion radiotherapy

Gunma Univ.   Athena Paz

★ **O-151** An estimation of cell survival using microdosimetric kinetic model and CR-39 in carbon ion irradiation

Gunma Univ.   Yoshiyuki Hirano

O-152 Skin damage caused by single doses of carbon ions

Gunma Univ.   Maika Yamaguchi

O-153 Biological washout effect of positron emitter after Carbon ion treatment

Gunma Univ. Hosp.   Takayoshi Ishii

★ **O-154** The protective effect of various amino acids on plasmid DNA damage induced by carbon ion irradiation

Kitasato Univ.   Katsunori Yogo

31. Radiation Therapy (particle) 7 (Irradiation Technique)

10:00–10:40   Moderator: Yoshikazu Tsunashima

O-155 Present status of full energy scanning for carbon-ion therapy at the NIRS-HIMAC

QST/NIRS   Yousuke Hara

★ **O-156** Development of a new ridge filter with honeycomb geometry for a pencil beam scanning system in particle radiotherapy

QST/NIRS   Ryohei Tansho

★ **O-157** Multiple Scattering Effect on Carbon CT Image.

Gunma Univ.   Sung Hyun Lee

★ **O-158** Charged particle computed tomography using different particles

QST/NIRS   Cécile Bopp

32. Radiation Therapy (particle) 8 (Respiratory Motion)

13:00–13:50　　　　　Moderator: Mutsumi Tashiro

O-159　Commissioning of Eclipse Treatment Planning System for Spot-scanning Nozzle in Hokkaido University Proton Therapy Center

Hokkaido Univ. Hosp.　Takaaki Yoshimura

★ **O-160**　The retrospective interplay effect evaluation for real-time image-gated proton therapy using the fiducial marker motion and treatment machine log

Hokkaido Univ.　Shusuke Hirayama

O-161　Impact of 4D-CT ventilation imaging-based functional treatment planning for proton-SBRT

Tohoku Univ.　Yoshiro Ieko

O-162　Markerless tumor tracking by classification of deep machine learning

Univ. of Tsukuba　Toshiyuki Terunuma

O-163　A real-time single-shot energy subtraction image filter for markerless tumor tracking in radiotherapy

QST/NIRS　Shinichiro Mori