

【General Session】

April 11 (Thu.) 416 + 417

1. Image Informatics/Processing/Analysis J1 Image reconstruction

13:00–13:50 Moderator: Atsushi Myojoyama

- 0-001 Image quality improvement of cone beam CT image reconstruction during treatment
Kyorin Univ. Kosuke Mano
- 0-002 An error evaluation of iterative image reconstruction method using chi-square (χ^2)
statistic minimization for Poisson-distributed projection data
Tokyo Metro. Univ. Hiroyuki Shinohara
- 0-003 Incident photon number and reconstructed linear attenuation coefficients in iterative CT
image reconstruction
Tokyo Metro. Univ. Hiroyuki Shinohara
- 0-004 A study of real-time 3D movie reconstruction for intensity modulated radiation therapy
using the MRI
The Univ. of Tokyo Ryota Kitsunai
- 0-005 Development of high-resolution X-ray camera for the refraction-contrast computed
tomography
Nagoya Univ. Naoki Sunaguchi

2. Image Informatics/Processing/Analysis J2 Applied mathematics/Deep learning

13:50–14:50 Moderator: Hidemi Kamezawa

- 0-006 Differentiation of brain tumors by characterization of non-contrast-enhanced MR images
using persistent homology
Teikyo Univ. Asuka Oyama
- 0-007 Deep learning based auto segmentation in male pelvic CT images using texture analysis
Kitasato Univ. Masato Sekiguchi
- 0-008 A Novel Method of Displaying Dose Distribution in Radiotherapy
Medipolis Ibusuki Yasumasa Kakinohana
- 0-009 Image quality improvement of DRR by super-resolution processing
Univ. of Tsukuba Tsubasa Abe
- 0-010 Real-time tumor-contouring by patient-specific deep learning: Evaluation using a
respiratory moving phantom
Univ. of Tsukuba Tsubasa Abe
- 0-011 Exploratory study of important radiomics features for a two-year survival classification
model of non-small cell lung cancer patients
Juntendo Univ. Urayasu Hosp. Tatsuya Inoue

3. Radiometry/Spectrometry/Dosimetry/Protection J1 Characteristics of detector

15:00–16:00 Moderator: Yusuke Koba

- 0-012 Estimation of amount of luminescence and Cerenkov lights in water irradiated by various
types of radiations
Nagoya Univ. Yoshiyuki Hirano
- 0-013 Performance evaluation of user's electrometer by using electrometer equipped with

- direct-current generator
Fukui Univ. Hosp. Naoki Kinoshita
- 0-014 Study on the effective point of the cylindrical ionization chamber in the measurement of carbon absorption dose 2
- Chiba Univ. Menamu Sano
- 0-015 The replacement correction factor for cylindrical cavities in with flattening filter (WFF) and flattening filter free (FFF) beams.
- Komazawa Univ. Arata Sudo
- 0-016 Beam quality conversion factor of Exradin ionization chambers for a CyberKnife photon beam
- NMIJ Morihito Shimizu
- 0-017 Determination of a beam quality conversion factor of microDiamond detectors in a CyberKnife photon beam by using a compact calorimeter
- Komazawa Univ. Takuya Saitou

**4. Radiometry/Spectrometry/Dosimetry/Protection J2 Chemical dosimeter/
Radiation protection 16:00–16:50 Moderator: Shunsuke Yonai**

- 0-018 Response characteristic of an alanine dosimeter for high-energy photon beams
AIST Hidetoshi Yamaguchi
- 0-020 Development of omnidirectional Compton camera which visualizes low energy gamma ray from Tc-99m with high sensitivity
Ibaraki Univ. Naofumi Narita
- 0-021 Evaluation of the occupational dose in CT-guided interventions using MDCT-fluoroscopy
Tohoku Univ. Yohei Inaba
- 0-022 Dosimetry of accidental exposure using fingernails
RIRBM Hiroshi Yasuda

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**5. Nuclear Medicine E1 Nuclear medicine 1
13:00–13:50 Moderator: Hiroshi Watabe**

- ★ 0-023 Performance characterization of a new whole-body PET prototype with four-layer DOI detectors
NIRS-QST Go Akamatsu
- ★ 0-024 Energy characterization of the 4-Layer DOI GAGG scatterer detector for whole gamma imaging
NIRS-QST Sodai Takyu
- ★ 0-025 Whole Gamma Imaging: demonstration of the $\beta + - \gamma$ coincidence
NIRS-QST Hideaki Tashima
- ★ 0-026 Development of a TOF helmet-type PET prototype having a timing resolution of 250 ps and its image reconstruction method
NIRS-QST Hideaki Tashima
- ★ 0-027 Initial results of trapezoid geometry small animal DOI PET detector using SSLE
NIRS-QST Han Gyu Kang

6. Nuclear Medicine E2 Nuclear medicine 2 13:50–14:30 Moderator: Go Akamatsu

- ★ 0-028 Advantages of spherical ROIs for calibrating and evaluating PET scanners using traceable point-like sources
Kitasato Univ. Mio Okamoto
- ★ 0-029 Three Dimensional Compton Imaging using C-shaped arm
GHMC Makoto Sakai
- ★ 0-030 Feasibility of 3D printed patient specific thyroid phantom for radiation dosimetry
Pulau Pinang Rafidah Binti Zainon

**7. Radiation Therapy (photon/electron) E1 IGRT
14:40–15:40 Moderator: Yuichi Akino**

- ★ 0-032 Optical tracking system with Kinect devices in radiation therapy
Hosei Univ. Kounoshin Abe
- ★ 0-033 The effect of the room brightness on the positioning accuracy with 3D surface-imaging system
Saiseikai Kumamoto Hosp. Yuki Omura
- ★ 0-034 Uncertainties of Soft-Tissue-based Patient Registration by Multiple Observers Using Cone-beam CT for Prostate Cancer Radiation Therapy
Kyushu Univ. Hosp. Taka-aki Hirose
- ★ 0-035 Three-dimensional tumor position estimation using image features on orthogonal kV X-ray projections: comparison of two feature extraction algorithms
Kyoto Univ. Shintaro Anbo
- ★ 0-036 Effect of MV scatter on kV projections during VMAT delivery to a pelvic phantom
Kyoto Univ. Kitamura Ayaka
- ★ 0-037 Quantification of the irradiated volume dependency of scattered X-rays from megavoltage photon beam using a kilovoltage X-ray imaging subsystem
Kyoto Univ. Hosp. Hiraku Iramina

**8. Radiation Therapy (photon/electron) E2 QAQC/Others
15:40–16:40 Moderator: Noriyuki Kadoya**

- ★ 0-038 Pseudo-CBCT image prediction of head and neck cancer patient using principal component vector fields of early treatment fractions
CIH of JFCR Masahiro Nakano
- ★ 0-039 Novel electron density based-CT image from single- and dual-energy scanning for radiation therapy treatment planning
Nagoya Univ. Takeshi Kamomae
- ★ 0-040 Evaluation of in-house QA software tool for an Elekta linac using a high sampling rate log file
SKG Hosp. Shiro Nishiyama
- ★ 0-041 Performance evaluation of 4D-CT features of Philips Brilliance64 CT scanner
Concord International Hosp. Mohamad Fahdillah Rhani
- ★ 0-043 Designing a 3D Printed Radiotherapy Phantom using 3DSlicer Software
Univ. of the Philippines John Paul Ortiz Bustillo

9. Radiation Therapy (photon/electron) E3 Dose verification/Patient specific QA
16:40–17:40 Moderator: Satoshi Kito

- ★ 0-044 Clarkson's method with effective depth correction for irregular surfaces
 Juntendo Univ. Satoru Sugimoto
- ★ 0-045 Evaluation of predicting transit dose accuracy using CT images to verify accuracy of
 gating radiation therapy
 Juntendo Univ. Jun Takatsu
- ★ 0-046 Independent calculation-based verification of VMAT-SBRT plans for lung cancer
 Kyoto Hosp. Tomohiro Ono
- ★ 0-047 Effects on Surface Dose from Air Gaps between Bolus and Skin Surface in X-ray Beam
 Radiation Therapy
 Sapporo City General Hosp. Taichi Okino
- ★ 0-049 Dosimetric effect of intrafractional organ deformation on volumetric modulated arc
 therapy planning techniques for prostate cancer
 Osaka Univ. Maria Varnava

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10. Radiation Therapy (heavy particle) J1 Commissioning
13:00–14:00 Moderator: Mutsumi Tashiro

- 0-050 Physical dose modelling and calculation results for carbon beam scanning in Osaka heavy
 ion therapy center
 Hitachi, Ltd. Yusuke Fujii
- 0-051 Clinical commissioning for treatment room 1 (FX1) at Osaka Heavy Ion Therapy Center
 HIMAK Toshiro Tsubouchi
- 0-052 Clinical commissioning for the start of respiratory gated carbon ion radiotherapy at Osaka
 Heavy Ion Therapy Center
 Osaka Heavy Ion Therapy Center Noriaki Hamatani
- 0-053 Commissioning of a treatment planning system, RayStation, for proton pencil beam
 scanning at Tsuyama Chuo Hospital
 Tsuyama Chuo Hosp. Yuki Tominaga
- 0-054 Experimental verification of fluence scaling factors for clinical proton beams
 Tsuyama Chuo Hosp. Masashi Yamanaka
- 0-055 Commissioning of a compact pencil-beam scanning proton therapy system: ProteusONE
 Narita Memorial Proton Center Masashi Tomida

11. Radiation Therapy (heavy particle) J2 Beam QA
14:00–14:50 Moderator: Yohsuke Kusano

- 0-056 Stabilization of beam axis extracted from synchrotron
 Gunma Univ Heavy Ion Medical Center Ryoto Tomo
- 0-057 Beam intensity dependence of beam orbit and efficiency in a heavy ion medical
 accelerator
 GHMC Hikaru Souda
- 0-058 Improvement of efficiency for daily QA at SAGA HIMAT Foundation
 SAGA HIMAT Takeshi Himukai
- 0-059 A correction method of proton fluence based on compensator thickness

- 0-060 Study on proton CT imaging using clinical proton beam
 NPTC Chihiro Omachi
 Hokkaido Univ. Hosp. Sodai Tanaka

12. Radiation Therapy (brachytherapy/others) J1 Brachytherapy/Others

15:00–15:50

Moderator: Yu Kumazaki

- 0-061 Imaging of Ir-192 source using a high energy gamma camera for high-dose-rate brachytherapy
 Nagoya Univ. Seiichi Yamamoto
- 0-062 Potential prognostic value of the Radiomics features based on CT images of prostate cancer patients treated with permanent interstitial brachytherapy.
 Kitasato Univ. Takeo Katakura
- 0-063 Impact of differences between quantitative analysis software programs for picket fence test with Elekta linear accelerator
 Jichi Med. Univ. Saitama Yuta Takahashi
- 0-065 Construction of safety management system in radiation therapy
 Univ. of the Ryukyus Masashi Kinjyo

13. Radiation Therapy (photon/electron) J1 Measurement and dosimetry 1

15:50–16:50

Moderator: Iori Sumida

- 0-066 Investigation of conversion absorbed dose to water reference dosimetry using spherical water equivalent Virtual phantom at TomoTherapy
 North Fukushima Medical Center Koji Ishita
- 0-067 New approach to calibrate the output accurately without measurement for the recent digital controlled linac.
 ASH Yuichiro Narita
- 0-068 Influence of atmospheric pressure on the output of a linac equipped with a sealed monitor chamber
 HCHP Masafumi Takagi
- 0-069 Small field photon beam dosimetry of TrueBeam linear accelerators: a multi-institutional analysis
 Osaka Univ. Yuichi Akino
- 0-070 Comparison of calculation results of TMRs with or without k_s factor for flattening filter free beams
 Komazawa Univ. Shota Watanabe
- 0-071 Improved dose estimation using vitamin B2 water for optical imaging of X-ray from medical linear accelerators (LINAC)
 Nagoya Univ. Chihiro Toyonaga

14. Radiation Therapy (photon/electron) J2 Patient specific QA

16:50–17:40

Moderator: Koji Sasaki

- 0-072 Feasibility of detecting the cause of errors in IMRT patient specific QA using radiomics features and machine learning
 Niigata Univ. Madoka Sakai
- 0-073 Fundamental study on measurement error criterion using dose deviation map in Gradient method

- Hokkaido Univ. Isshi Nara
 0-074 Utility of Three-Dimensional Mean Gamma Index in Volumetric Modulated Arc Therapy Patient Specific QA
- OICI Reimi Taniguchi
 0-075 Delivery quality assurance method using plastic scintillator and CCD camera in helical tomotherapy
- Kitasato Univ. Yuichi Tanaka
 0-076 Comparison of dose distribution verification results using two different three-dimensional detectors
- Fujita Health Univ. Hosp. Yasunori Saito

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15. Radiation Therapy (brachytherapy) E1 Brachytherapy/Others

9:10–9:50

Moderator: Chie Kurokawa

- ★ 0-077 Verification of Treatment Time in Interstitial Brachytherapy using Paris System
 Gono Univ. Sujan Mahamud
- ★ 0-079 Virtual phantom study to evaluate inverse planning optimization of high dose rate brachytherapy for endometrial cancer
 Hokkaido Univ. of Science Masami Harada
- ★ 0-080 Virtual phantom study to compare prescription point A with HR-CTV D90 using inverse planning optimization in HDR brachytherapy for uterine cervical cancer
 Hokkaido Univ. of Science Tomomi Sogo

16. Image Informatics/Processing/Analysis E1 Deep learning

10:00–10:50

Moderator: Taiki Magome

- ★ 0-081 A clinically applicable deep learning model for segmentation in the prostate region
 Kyoto Univ. Mitsuhiro Nakamura
- ★ 0-082 A Convolutional Neural Network based approach for generating PET/CT image series in shorter scan time: A feasibility study.
 NIRS-QST Ritu Bhusal Chhatkuli
- ★ 0-083 Improved scheme of an automated detection of gastric cancer using deep learning
 Fujita Health Univ. Kazuma Enomoto
- ★ 0-084 Automated approach for estimation of sizes of unruptured intracranial aneurysms in MRA images by using localized sparse non-negative matrix factorization
 Kyushu Univ. Zhuangfei Ma
- ★ 0-085 Relationship of MoCA assessment with hypometabolic region of ^{18}F -FDG PET/CT in Alzheimer disease patients
 Univ. Sains Malaysia Siti Aishah Abdul Aziz

17. Image Informatics/Processing/Analysis E2 Radiomics

11:00–11:50

Moderator: Jun'ichi Kotoku

- ★ 0-086 Prognostic prediction based on diagnostic CT image features before SBRT for lung cancer patients: a retrospective single-institutional study
 Kyoto Univ. Ryo Kakino

- ★ 0-087 Radiomics-based malignancy estimation of parotid gland tumor in preoperative magnetic resonance images
Teikyo Univ. Hidemi Kamezawa
- ★ 0-088 Prognostic shape-based features on CT images for non-small-cell lung cancer patients
Kyushu Univ. Sachine Nakayama
- ★ 0-089 Exploring potential of radiomic features in identification of EGFR-mutant in lung cancer patients
Kyushu Univ. Kenta Ninomiya
- ★ 0-090 Selection of wavelet basis functions in radiomic prediction for prognoses in head and neck cancer patients
Kyushu Univ. Aki Yoshihisa

18. Radiation Therapy (heavy particle) E1 Simulation/Others

15:10–16:10

Moderator: Taku Inaniwa

- ★ 0-091 Development of new bolus for application in boron neutron capture therapy
Kyoto Univ. Akinori Sasaki
- ★ 0-092 Clinical commissioning for proton therapy with line scanning method at Kouseikai Proton Therapy Center
Kouseikai Proton Therapy Center Yuya Azuma
- ★ 0-093 Biological model and calculation results for carbon beam scanning in Osaka heavy ion therapy center
Hitachi, Ltd. Shinichiro Fujitaka
- ★ 0-094 The Monte Carlo simulation for lateral radiation quality of carbon ion beam with the empirical model
NIRS-QST Taku Nakaji
- ★ 0-095 Development of a Monte Carlo dosimetry system for retrospective study of heavy-ion therapy
JAEA Takuya Furuta
- ★ 0-096 Development of a CT-number parameterization method and validation for Monte Carlo simulation of carbon-ion radiotherapy: A preliminary study
NIRS-QST Weishan Chang

19. Radiation Therapy (heavy particle) E2 Range verification

16:10–17:10

Moderator: Naruhiro Matsufuji

- ★ 0-097 Simulation studies of a proton range-verification method using ionoacoustic wave generated from spherical gold fiducials
Hokkaido Univ. Taisuke Takayanagi
- ★ 0-098 Influence of dose and positional errors in proton therapy
FHU Yuta Omi
- ★ 0-099 Development of a system to support intra-fractional clinical decision for real-time image-gated proton therapy - (1) Automatic actual-dose calculation system
Hokkaido Univ. Shusuke Hirayama
- ★ 0-100 LET dependency of fluorescent screen for measuring low-dose envelope in scanned carbon-ion therapy
Nagoya Univ. Katsunori Yogo
- ★ 0-101 Optical imaging for the range estimation of O-15 beam
NIRS-QST Han Gyu Kang

- ★ 0-102 Feasibility of Compton-PET to image C-10 distribution for range verification of carbon ion therapy

NIRS-QST Akram Mohammadi

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20. Radiometry/Spectrometry/Dosimetry/Protection E1 Measurement and dosimetry
9:10–9:50 Moderator: Hiroshi Yasuda

- ★ 0-103 Fundamental study on a condenser dosimeter using a skin-insulated USB-A-mini-substrate with a silicon X-ray diode in radiation therapy
Iwate Medical Univ. Satoshi Yamaguchi
- ★ 0-104 Response of a radiophotoluminescent glass dosimeter depending on transverse magnetic fields
Kumamoto Univ. Ohno Takeshi
- ★ 0-105 Fundamental study of the neutron ambient dose-equivalent measurement using two CsI self-activation sensors
Kyushu Univ. Yumika Hanada
- ★ 0-106 Estimation of radiation dose to the eye lenses from head computed tomography: with and without bismuth shield
Khon Kaen Univ. Petcharakorn Hanpanich

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21. Education/Others J1 Material/Simulation
14:00–14:20 Moderator: Akihiro Nohtomi

- 0-107 Fundamental approach of magnetic resonance imaging using radiosensitizer nanoparticle (TiO₂) as theranostic drug
Kobe Univ. Hosp. Hiroaki Akasaka
- 0-108 Construction of Numerical Simulation Environment for CT Noise Characteristics
Kyorin Univ. Takaho Hirano

22. Education/Others E1 New projects
14:20–14:40 Moderator: Keiichi Akahane

- ★ 0-109 E-encyclopaedia and e-dictionary of medical physics - method, results and new update project
IOMP Slavik Tabakov
- ★ 0-110 The Leading Role of the International Union of Physical and Engineering Sciences in Medicine (IUPESM) in Promoting Workforce and Technology Dedicated to Human Health
IUPESM Magdalena Stoeva

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23. Radiation Therapy (photon/electron) E4 Algorithm/Others

9:10–10:00 Moderator: Mitsuhiro Nakamura

- ★ 0-111 Development of a raster scan IMRT using robotic radiosurgery system: Part II, optimization of fluence map
Miyakojima Clinic Hiroya Shiomi
- ★ 0-112 Compare the difference between dose results calculated with Analytical AAA, dose calculated with PBC algorithm in Eclipse software, and measurement dose
Hanoi Oncology Hosp. Soai Dang Quoc
- ★ 0-113 Research, analyze the dose results calculated with AAA algorithm in eclipse software of new treatment planning system
Hanoi Oncology Hosp. Soai Dang Quoc
- ★ 0-114 Pediatric craniospinal irradiation with general anesthesia at hue central hospital
husc. hueuni, Hue Le Trong Hung
- ★ 0-115 Short-course preoperative radiation therapy in rectal cancer
HUMP Pham Nguyen Tuong

24. Radiation Therapy (photon/electron) E5 Treatment planning 1

10:10–11:00 Moderator: Takashi Hanada

- ★ 0-116 Mechanical performance of a commercial knowledge-based VMAT planning for oropharyngeal cancer
Kindai Univ. Mikoto Tamura
- ★ 0-117 Parameter estimation of NTCP model for late rectal bleeding: observations from prostate cancer patients with IMRT in clinical practice
Kitasato Univ. Genki Ishii
- ★ 0-118 4D-CBCT ventilation image-based VMAT plans are comparable to 4D-CT ventilation image-based plans : evaluating 4D-CBCT ventilation images
Tohoku Univ. Hikaru Nemoto
- ★ 0-119 A Hybrid IMRT Technique for Treatment of Breast Cancer: A Dosimetric Study
GU, Savar Mohammad Mokhlesur Rahman
- ★ 0-120 Research, analyze Field in Field planning technique for whole brain radiotherapy
Hanoi Oncology Hosp. Soai Dang Quoc

25. Radiation Therapy (photon/electron) E6 Machine learning

11:10–11:50 Moderator: Masayori Ishikawa

- ★ 0-121 Dose calculation using a synthetic CT generated from multi-contrast MR images with deep convolutional neural network
Osaka Univ. Yuhei Koike
- ★ 0-122 Homology as novel radiomic features for prediction of the prognosis of lung cancer based on CT-based radiomics
Tohoku Univ. Shohei Tanaka
- ★ 0-123 Development of multi-atlas based intra-prostatic urethra auto-segmentation using machine learning for prostate cancer radiotherapy
Tohoku Univ. Hisamichi Takagi

26. Diagnostic Imaging (X-ray) J1 Diagnostic Imaging (X-ray) 1**13:10–13:50****Moderator: Akihiro Haga**

- 0-125 Determination of point spread function accompanied with verification in iterative reconstruction computed tomography
Niigata Univ. Kenichi Sakai
- 0-126 Evaluation of image quality in forward projected model-based iterative reconstruction at head CT using a cerebral stroke phantom model
Kitasato Univ. Hidetake Hara
- 0-127 High-speed dual-energy X-ray photon counter using a YAP(Ce)-photomultiplier detector and its application to low-dose computed tomography
Iwate Medical Univ. Yasuyuki Oda
- 0-128 Computational simulation of metal artifact generation in CT image: A pilot phantom study
Niigata Univ. Daisuke Mugishima

27. Diagnostic Imaging (X-ray) E1 Diagnostic Imaging (X-ray) 2**14:00–14:30****Moderator: Kiyomitsu Shinsho**

- ★ 0-129 Intense nickel-K-photon irradiation from weakly-ionized linear plasma X-ray source using a zinc reflector
Iwate Med. Univ. Eiichi Sato
- ★ 0-130 Dual-energy X-ray computed tomography using a cadmium-telluride array detector
Iwate Med. Univ. Eiichi Sato
- ★ 0-131 Relation between material decomposition accuracy and the number of X-ray photons in photon-counting CT
Hosei Univ. Kazumi Murata

April 13 (Sat.) 419**28. Magnetic Resonance/Diagnostic Imaging(others) E1 Diagnostic imaging (Others)****9:10–10:00****Moderator: Takeyuki Hashimoto**

- ★ 0-132 Monte-Carlo simulation-based estimation of intravoxel incoherent motion (IVIM) parameters in diffusion-weighted MRI
Kyushu Univ. Alamgir Hossain
- ★ 0-135 Noise reduction in X-ray image using sparse regularization: A feasibility study
The Univ. of Tokyo Hosp. Takahiro Iwasaki
- ★ 0-136 Evaluation of Re-reproducibility of computed Tomography-based Lung Ventilation Imaging Using DIR
Fujieda City Hosp. Yoshihiro Kawai

29. Magnetic Resonance/Diagnostic Imaging(others) J1 Magnetic resonance and others**13:10–14:00****Moderator: Seiji Kumazawa**

- 0-137 Evaluation of muscle activities difference between dominant and non-dominant arms using MRI
Hokkaido Univ. Ayumi Kido
- 0-138 Oxygen molecules decrease relaxation times of magnetic resonance signal conspicuously

in cellular mimetic viscous solution

- 0-139 Differentiation of high-grade glioma and brain metastases by using texture analysis on non-enhanced MR images
Hokkaido Univ. Risa Kusumoto
- 0-140 Classification of Optical Coherence tomography images by Capsule Network
Teikyo Univ. Yusuke Saikawa
- 0-141 850-nm-peak high-spatial-resolution near-infrared-ray computed tomography in the living-body window
Teikyo Univ. Tsuji Takumsa
- Iwate Medical. Univ. Hosp. Sato Yuichi

30. Nuclear Medicine J1 Nuclear medicine 3

14:10–14:50

Moderator: Hideaki Tashima

- 0-142 Data analysis tool for handling spherical ROI data for calibration and evaluation of PET scanners using traceable point-like sources
Kitasato Univ. Kentaro Takahashi
- 0-143 The accuracy of delivery dose in nuclear medicine therapy
Toho Univ. Sakura MC Teruo Ito
- 0-144 Evaluation of improved head amp readout circuit in Electron-Tracking Compton Camera
Tokai Univ. Shingo Uematsu
- 0-145 Comparison of noise equivalent count rates (NECRs) for the PET systems with different ring diameter
Nagoya Univ. Kouhei Nakanishi

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31. Radiation Therapy (photon/electron) J3 Treatment planning 2

9:00–10:00

Moderator: Toru Kawachi

- 0-146 Advantage of single planning for simultaneous irradiation of multiple targets over multiple planning for each target in robotic radiosurgery system
Nagoya Univ. Hosp. Motoki Kumagai
- 0-147 Sectional optimization of collimator angles in VMAT for multiple brain metastases
Kumamoto Univ. Ryota Nanatsue
- 0-148 Evaluation of metal artifact reduction by dual-energy CT using the virtual monochromatic spectral imaging
Niigata Univ. Masataka Ueda
- 0-149 Evaluation of the dosimetric robustness for 4DCT based internal margin against respiratory motion variations of lung cancer
JFCR Daimu Fujimoto
- 0-150 Mechanical performance of VMAT for prostate cancer with three model of Rapid Plan
Osaka Univ. Haruhi Tsuru
- 0-151 Evaluation of Finite-size pencil beam and Monte Carlo dose calculation algorithms for tumor-tracking intensity modulated radiation therapy
The Univ. of Tokyo Kohei Kawata

32. Radiation Therapy (photon/electron) J4 IGRT/Others

10:00–11:00

Moderator: Yukio Fujita

- 0-152 Development of patient motion monitoring system under irradiation using face detection and optical flow algorithm
Hokkaido Univ. of Science Ryo Onchi
- 0-153 The relationship between internal and external marker positions during VMAT under end-exhalation breath-hold for pancreatic cancer
Kyoto Univ. Makoto Sasaki
- 0-154 Cone-beam CT image quality improvement with Cycle-Consistency Generative Adversarial Network (CycleGAN)
The Univ. of Tokyo Hosp. Satoshi Kida
- 0-155 Feasibility study of constructing a model for predicting the daily variation of the risk of rectal toxicity in prostate IMRT
Niigata Univ. Haruka Koarai
- 0-157 The simulation on electron beam focusing output from linear accelerator
Tokyo Metro. Univ. Ryo Imai

33. Radiation Therapy (photon/electron) J5 Measurement and dosimetry 2

13:00–14:00

Moderator: Naoki Hayashi

- 0-158 Impact of transverse magnetic fields on dose response of a nanoDot OSLD
Kumamoto Univ. Shotaro Ito
- 0-159 Angular dependency of visible light imaging of water by radiations using a photon propagation simulation
Nagoya Univ. Yoshiyuki Hirano
- 0-160 Fundamental study on development of 2D array dosimeter using capacitance change according to radiation dose
The Univ. of Hokkaido Yuma Kuga
- 0-161 Estimation of the three-dimensional (3D) dose distribution of electron beams from medical linear accelerator (LINAC) using plastic scintillator plate
Nagoya Univ. Ryo Horita
- 0-162 The dosimetric commissioning results about the TrueBeam using RBD: a comparison of between the Eclipse and the RayStation
Kagoshima Univ. Hosp. Masahiko Toyota
- 0-163 Theoretical study on human-phantom thermoluminescence dosimeter in photon radiation therapy
Tokyo Metro. Univ. Shin Yanagisawa

34. Radiation Therapy (photon/electron) J6 MRI-Linac

14:00–14:50

Moderator: Hiroyuki Okamoto

- 0-164 Evaluation of intrafractional prostate motion in stereotactic body radiotherapy with magnetic resonance image guided radiotherapy system
NCCH Junichi Kuwahara
- 0-165 Assessments of dosimetric effects by latency of beam control in MRI guided-radiotherapy system
Tokyo Metro. Univ. Hiroki Nakayama
- 0-166 Preliminary study of polymer gel dosimeter for QA in MRI-guided radiotherapy system

- 0-167 Monte Carlo study of small-field dosimetry for an Elekta MR-linac system
Tokyo Metro. Univ. Mihiro Takemori
Kumamoto Univ. Masayuki Yano
- 0-168 Impact of inline magnetic fields on dose distributions for VMAT in lung tumor
Kumamoto Univ. Takahiro Kubota

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35. Radiation Therapy (heavy particle) J3 Measurement and Dosimetry

13:00–13:50

Moderator: Toshiyuki Toshito

- 0-169 Comparison between luminescence and dose in water during uniform-field irradiation by spot scanning proton beam
Nagoya Univ. Masataka Komori
- 0-170 Measurements of the propagation difference between Cherenkov-light and luminescence of water during carbon-ion beam irradiation
Nagoya Univ. Yohei Kitao
- 0-171 Imaging of fragment particles in water by nuclear spallation during carbon-ion irradiation
Nagoya Univ. Takuya Yabe
- 0-172 Development of a YAP camera for real-time imaging of secondary electron bremsstrahlung X-ray emitted during carbon-ion irradiation
Nagoya Univ. Seiichi Yamamoto
- 0-173 A Study of dose distribution measurement of carbon beam using scintillating glass GEM (3)
NIRS-QST Yusuke Koba

36. Radiation Therapy (heavy particle) J4 Treatment planning/Others

13:50–14:40

Moderator: Yoshinori Sakurai

- 0-174 Comparison of treatment plans using IMPT for head and neck region with or without energy absorbers and collimators
NPTC Eiki Nikawa
- 0-175 Upgraded analyses for the effect of organ motion on proton prostate treatment using full sets of daily CT images
Fukui PTC Yoshikazu Maeda
- 0-176 Development of the Monte Carlo based treatment planning system by combination with the tetrahedral based human modeling method
Univ. of Tsukuba Hiroaki Kumada
- 0-177 Biological and physical evaluation of accelerator-based BNCT system installed in NCC
NCCRI Shoji Imamichi
- 0-178 Monte Carlo study of out-of-field exposure in carbon-ion radiotherapy with a passive beam: Organ doses in pediatric brain tumor treatment.
NIRS-QST Shinnosuke Matsumoto