## [General Session (Poster)]

| P-001. | Evaluations of FLASH electron beam characteristics using the electron applicator                    |        |
|--------|---|--------|
|        | Korea Institute of Radiological & Medical Sciences GyuSeok Ch                                       | 10     |
| P-002. | Development of Bolus Optimization System for Electron Conformal Therapy                             |        |
|        | Seoul National University Bundang Hospital Sang-Won Kan   | ıg     |
| P-003. | The novel method to fabricate the patient specific bolus  |        |
|        | Sungkyunkwan Unviversity Samsung Changwon Hospital Jeongho Kin                                      | m      |
| P-004. | Development and Validation of a Radiation Therapy Quality Assurance Credentialing System            |        |
|        | for Clinical Trials in South Korea  |        |
|        | Korea Institute of Radiological & Medical Sciences JaeChoon Le                                      | ee     |
| P-005. | Feasibility study of gantry head mounted magnet assembly for an alternative of IORT cone            |        |
|        | Department of Radiation Oncology, Asan Medical Center Kihong Pa                                     | ık     |
| P-006. | Development of an Algorithm for Chemical Composition Analysis Using Dual-Energy CT                  |        |
|        | Department of Medicine, Yonsei University College of Medicine,                                      |        |
|        | Seoul, Republic of Korea Jeong Heon Kin   | m      |
| P-007. | Influence of surrounding media on electron PDD measurements with reusable PVA-I radiochromic gel    | ĺ      |
|        | dosimeter   |        |
|        | Hiroshima Heiwa Clinic Ryosuke Kuriha   | ra     |
| P-008. | Multi-institution tests in magnetic-resonance image guided-radiotherapy quality assurance           |        |
|        | by the developed end-to-end phantom   |        |
|        | Department of Radiation Oncology, Juntendo University Graduate School of Medicine Kotaro Iijim      | ıa     |
| P-009. | Log File-based Quality Assurance Method for Respiratory Gating Precision in Varian Respiratory      |        |
|        | Gating for Scanner System   |        |
|        | Catholic University, Seoul St. Mary's Hospital Wonjoong Chec  | n      |
| P-010. | Quality assurance of longitudinal dose profiles for helical tomotherapy with an ion chamber array   |        |
|        | Pusan National University Hospital Dahl Par   | rk     |
| P-011. | Feasibility of Optimal Vertex Size and Spacing for Lattice Radiotherapy Implementation Using Helica | ıl     |
|        | Tomotherapy   |        |
|        | Seoul St. Mary's Hospital Yunji Seo   | ol     |
| P-012. | Development of megavoltage electron converge system for spot scanning electron beam therapy         |        |
|        | Graduate School of Health Sciences, Tokyo Metropolitan University  Yuma Hayasl                      | hi     |
| P-013. | Development of alignment test method for high precision medical accelerators                        |        |
|        | Central Radiology, Izumi City General Hospital Shigeo Ana   | ai     |
| P-014. | Evaluation of The Usefulness of Integral Quality Monitor for Real-time Patient-tailored QA          |        |
|        | Korea Institute of Radiological & Medical Sciences Jung Ju J  | ſο     |
| P-015. | Predictive Model Development for Identifying Potential DQA Failures Using Planning Parameters and   | f      |
|        | Dosiomics Features  |        |
|        | Ajou University School of Medicine Jina Kin   | m      |
| P-016. | Evaluation of Patient-Specific QA Dose Reconstruction Systems Comparing Log File-Based              |        |
|        | and Measurement-Based Approaches  |        |
|        | Ajou University School of Medicine Jina Kin   | m      |
| P-017. | Feasibility of Perspective-n-Point method for Surface-Guided Radiation Therapy                      |        |
|        | Sapporo Kojinkai Memorial Hospital Daisuke Tan  | iii    |
| P-018. | Evaluation of the effect of setup errors on Radixact Synchrony tracking system: A phantom study     |        |
|        | Iwata City Hospital Masatoshi Miu   | ra     |
| P-019. | Monte Carlo modelling of a 3 MV medical linac for stereotactic radiosurgery                         |        |
|        | Dongnam Institute of Radiological and Medical Sciences Dong Hyeok Jeon                              | ıg     |
|        |   | $\sim$ |

P-020. Consistency of dose rates after application of the machine-specific reference field correction factors for Leksell Gamma Knife® Seoul National University Hyun-Tai Chung P-021. Changes in patient marker coordinates with high-definition motion management system during frameless gamma knife radiosurgery Chungbuk National University Hospital Hyeong Cheol Moon P-022. Initial Clinical Experience and Commissioning of the Zap-X System for Intracranial Radiosurgery in the Republic of Korea Dongguk University Ilsan Hospital Yunseo Ji P-023. Impact of Patient Positioning Accuracy on Treatment Outcomes in ZAP-X Radiosurgery System Dongguk University Ilsan Hospital Yunseo Ji P-024. Comparative Study of Gamma Knife and Zap-X Radiosurgery Systems for Brain Tumor Treatment Dongguk university ilsan hospital Yunseo Ji P-025. The evaluation of relationship between inter- and intra- prostate motion and radiotherapy planning information Faculty of Health Sciences, Okayama University Medical School, Mizuki Yoshioka Okayama University P-026. Evaluation of a phantom for quality Assurance of surface-guided radiation therapy devices utilizing the light-section method Seirei Hamamatsu General Hospital Tatunori Saito P-027. Production of All-in-one IGRT phantom for Simultaneous Assessment of Geometrical Accuracy and **Image Quality** Department of Radiation Oncology, Chung-Ang University Gwnag Myeong Hospital Minsoo Chun P-028. Evaluation of the fiducial marker tracking accuracy in YOLOv5 + deepSORT deep learning framework Asan Medical Center Yongjin Kim P-029. Assessing the Feasibility and Efficacy of Linear Accelerator-Based Spatially Fractionated Radiotherapy (SFRT) Department of Radiation Oncology, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea Young kyu Lee P-030. A Phantom Study of Patient-Specific Deep Learning for Liver Tumor Tracking Using Orthogonal X-ray Fluoroscopic Image Pairs Graduate School of Comprehensive Human Science, University of Tsukuba Ryosuke Nakamura P-031. Actual Delivered Dose Calculation Technique for Lung SBRT via CBCT Image Acquired during Phase-gated VMAT Delivery Department of Radiation Oncology and Image-Applied Therapy, Kyoto University Hiraku Iramina P-032. Feasibility study of split-constant dose rate VMAT in the treatment of left-sided breast cancer Inje University Sanggye Paik Hospital Jae-Yong Jung P-033. Assessment of three Auto-Segmentation Contour Software Accuracy using Geometric Metrics for Pelvis Structures Korean Institute of Radiological and Medical Science School Campus, University of Science and Technology Vannyat Ath P-034. Modeling and Validation of Total-Body Irradiation Compensator using Radiological Depth from Computed Tomography Images Pusan National University Hospital Haryung Park P-035. Evaluation of the New VOLO Ultra Planning Parameters Using the Dosimetric Quality and Delivery Efficiency for Prostate Cancer Department of Radiation Onoclogy, College of Medicine, Korea University Eun Jeong Heo P-036. Inference of areas outside the field of view in CT Images using an image inpainting model Hokkaido University Shumpei Yamasaki

| P-037. | Improving the Accuracy of Soft Error Cross Section Evaluation in Particle Therap                              | y                          |
|--------|---|----------------------------|
|        | Gunma University Heavy Ion Medical Center   | Makoto Sakai               |
| P-038. | Investigation of radiosensitization effects of boron agents with different subcellula proton therapy          | r distribution in          |
|        | Nagoya proton therapy center, Nagoya west medical center,   |                            |
|        | Nagoya City University  | Mitsuhiro Kimura           |
| P_039  | Measurement of spatial distribution of neutrons and gamma rays for BNCT using                                 |                            |
| 1-057. | at Kyoto University Reactor   | imaging place              |
|        | Kyoto Pharmaceutical University   | Kenichi Tanaka             |
| D 040  | · · · · · · · · · · · · · · · · · · ·   |                            |
| P-040. | Applicability of first collision source method in Monte Carlo dose calculation for I                          |                            |
| D 041  | Kyoto University  | Takushi Takata             |
| P-041. | A model to describe radiation-induced cell death II -Effects of mixed irradiation w order is changed-         |                            |
|        | University of Tsukuba   | Takeji Sakae               |
| P-042. | Theoretical Detection Potential of Array Detectors for Small-Size PBS Proton Bea                              | ams                        |
|        | Based on Detector Resolution and Spot Size  |                            |
|        | Korea National Cancer Center  | Jongeun Kim                |
| P-043. | Independent Dose Verification System for Carbon-ion Radiotherapy using TOPAS                                  | Monte Carlo code           |
|        | Yonsei University   | Yongdo Yun                 |
| P-044. | Dosimetric evaluation for heavy ion radiotherapy in head and neck region with clienergy CT                    | nical trial of dual        |
|        | National Institutes for Quantum Science and Technology  | Makoto Sakama              |
| P-045. | Measurement of linear energy transfer in scanned carbon-ion radiotherapy for paticancer                       |                            |
|        | QST Hospital  | Taku Nakaji                |
| D 046  | Fundamental characteristic of monitor for carbon FLASH therapy about general re                               | •                          |
| r-040. | •   |                            |
| D 047  | Osaka University Graduate School of Medicine  | Naoki Ishino               |
| P-04/. | Study of In-vivo Dosimetry for Proton Therapy using Deep Learning   | V - !! -1. ! M - 41. ! 4 - |
| D 040  | Proton Therapy Center, Fukui Prefectural Hospital   | Kelichiro Matsushita       |
| P-048. | Development of an Airtight Cell Culture Container for Enhanced FLASH Studies                                  | C1 : '' NI                 |
| D 0.40 | Sumitomo Heavy Industries, Ltd.   | Shinji Nomura              |
| P-049. | Beam size dependency of Ultra-high dose rate  | 37 1177 1 11               |
|        | Sumitomo Heavy Industries, Ltd.   |                            |
| P-050. | Feasibility Study of In-beam PET-based Range Verification for Carbon-ion Radiot                               |                            |
|        | Yonsei University College of Medicine   | Seokho Lee                 |
| P-051. | Monte Carlo Calculation of Secondary Particle Contribution to Depth Dose Curve and 250 MeV/u Helium ion Beams | for 252 MeV Proton         |
|        | Dongnam Institute of Radiological & Medical Sciences  | Kyoung Won Jang            |
| P-052. | Clinical Application of GPGPU-Based Full Monte Carlo Simulation at Nagoya Pro-                                | oton Therapy Centre        |
|        | Nagoya Proton Therapy Center  | Chihiro Omachi             |
| P-053. | Requirements for the particle therapy system simulation framework in the era of d                             |                            |
|        | National Institute of Technology, Toyama College  | Tsukasa Aso                |
| P-054. | Evaluation of the radiosensitization effect of gold nanoparticles on plasmid DNA of                           |                            |
| 1 00   | therapeutic carbon ion beams  | annage maneea ej           |
|        | Graduate School of Medicine, Nagoya University  | Katsunori Yogo             |
| P-055  | Development of Volumetric Imaging Technique for Real-time Image-guided Radia                                  | _                          |
|        | Graduate School of Engineering, Hokkaido University   | PJ                         |
|        | Division of Quantum Science and Engineering   | Takumi Inakoshi            |

P-056. Development of a deep learning-based dose conversion model adopted for various tumor sites in proton beam therapy Southern Tohoku Proton Therapy Center Ryohei Kato P-057. Validation of dose calculation accuracy of TPSs focus on dose calculation algorithm and irradiation field formation method Nagoya Proton Therapy Center Hideto Kino P-058. Analysis of inter-fractional anatomical changes of pelvic organs using deformable image registration in prostate radiotherapy University of Tsukuba Shuto Uematsu P-059. A Study of Mixture Dosimeter of Photoconductor and Scintillator Material for Quality Assurance of Radiation Therapy Seoul National University Bundang Hospital Moo-Jae Han P-060. Dose verification and calibration of EPR/alanine dosimeter in electron beams used in radiotherapy linear accelerator. Dongnam Institute of Radiological & Medical Sciences (DIRAMS) Jung Ki Kim P-061. Evaluation of optically stimulated luminescence dosimeter (OSLD) for total skin electron beam therapy (TSEBT) using 4 MeV Yeungnam University Medical Center Sung Yeop Kim P-062. TL and OSL characteristics of BeO ceramic plates in BNCT irradiation fields Tokyo Metropolitan University Mitsuki Kawane P-063. Effect of high-Z element on the dose-response of PVA-Iodide-type radiochromic gel dosimeter Hiroshima International University Shin-ichiro Hayashi P-064. Temperature characteristics of a polyvinyl alcohol-iodide radiochromic gel dosimeter Mizuki Kanai University of Tsukuba P-065. Study for usefulness of the Water-Equivalent Phantom for Film Dosimetry in a Clinical Linear Accelerator Korea Institute of Radiological and Medical Sciences Soon Sung Lee P-066. Improvement of Flexible Film Dosimeter Performance by Incorporating Antioxidants and Aluminum Oxide Seoul National University Hospital Chang Heon Choi P-067. FLUORESCENT Ink Tattoos and UV Lamp System for Radiation Treatment Patients. Seoul National University Hospital Chang Heon Choi P-068. Measurement of the total charge-changing cross-sections for therapeutic carbon beam Research Institute of Nuclear Engineering, University of Fukui Ryuki Mishima P-069. Identifying decay modes in fragmentation reactions of therapeutic carbon beam Yosuke Iwasaki Research Institute of Nuclear Engineering, University of Fukui P-070. Low MU dose rate measurement in a linear accelerator using a UVC camera Tokyo Metropolitan University Atsushi Myojoyama P-071. Development of 4D tracking system for ir-192 source using GPU-based accelerated reconstruction algorithm and compact gamma camera Inha University Hospital Boram Lee P-072. Preliminary Study of Picosecond Resolution Time of Flight Measurement Using MRPC for Particle Therapy Woochan Lee Yonsei University P-073. Construction and Evaluation of FLASH Proton Beam system in MC-50 Cyclotron Korea Institute of Radiological & Medical Sciences, Republic of Korea Youngjae Jang P-074. Development of external dosimetry audit for heavy ion radiotherapy using radio photoluminescent glass dosimeters Juntendo University Sota Takauji P-075. Linear energy transfer (LET) and field size dependence of a radiophotoluminescent glass dosimeter for carbon beams

Graduate school of Health Science, Juntendo University Ryo Watanabe

P-076. Experimental investigation of a novel approach for rapid and safe annealing of radiophotoluminescence glasses

Research Institute for Radiation Biology and Medicine,

Hiroshima University, Hiroshima, Japan Soheil Aghabaklooei

P-077. Development of Collapsed Cone Convolution Algorithms in Dose Calculations for High Dose Rate Brachytherapy

Department of Biomedical Engineering and Department of Biomedicine & Health Sciences, College of Medicine,

The Catholic University of Korea, Seoul, South Korea Dongsan Kang

P-078. Establishing Quality Assurance Protocol for Medical Linear Accelerator Based on 2D Ionization Chamber Array

Asan Medical Center Uiseob Lee

P-079. Clinical Evaluation of Patient-Specific 3D Boluses Fabricated Using 3D Printed Molds and Casting Method

Seoul National University Hospital Sung Young Lee

P-080. Experimental Investigation of a Compact Epi-thermal Neutron Flux Measurement System for Realtime Beam Monitoring in BNCT

Division of Sustainable Energy and Environmental Engineering,

Graduate School of Engineering, Osaka University Jiye Qiu

P-081. Development of 6Li-loaded water-based liquid scintillator for the detection of secondary neutron in particle therapy

Nagoya City University Yoshiaki Kibe

P-082. Characterization of Ultra-High-Dose-Rate Electron Beam Irradiation Device for Preclinical Flash Radiotherapy Studies

Research Center, Dongnam Institute of Radiological & Medical Sciences

Hyun Kim

P-083. Validation of the performance of dosimetry methods in proton FLASH radiotherapy

National Cancer Center (Korea)/Hanyang University Chae-Eon Kim

P-084. Development of a Recording System for CBCT Imaging Dose during Pediatric Radiation Therapy and Angle Optimization Testing

Inje University Sanggye Paik Hospital Dong-Jin Kang

P-085. Influence of storage environment on the distortion of the incident window of the horizontal beam water phantoms

Nagoya City University West Medical Center Akihito Shimizu

P-086. Dosimetric effects of small field size, dose grid size, and variable split-arc methods on gamma pass rates in radiation therapy

Yuuai Medical Center Tsunekazu Kuwae

P-087. Validation of approximate formulas for optimal organ absorbed dose estimation in CT examination Department of Radiology and Radiation Oncology,

Tokyo Medical University Ibaraki Medical Center Masato Takanashi

P-088. Workload-based Radiation Shielding Optimization in Helical Tomotherapy Vaults

Hanyang University, Department of Nuclear Engineering Wonhyeong Lee

P-089. Comparison of Nuclear Data Library for Concrete Activation in a Large Accelerator Facility using PHITS

Department of Nuclear Engineering, Hanyang University

Euna Lee

P-090. A Study on Rapid Radiation Source Tracking Using Multiple Radiation Spectroscopy Detectors

Department of Multidisciplinary Radiological Science,

Dongseo University, Busan 47011, Republic of Korea Hyundong Kim

Graduate School of Health Science, Juntendo University, Tokyo, Japan Shuto Minamikawa P-092. Evaluation of gamma ray reduction using tungsten-containing rubber for shielding 177Lu emission: A study on practical thickness Department of Radiology, Kansai Electric Power Hospital Katsuya Okuhata P-093. Optimal reconstruction algorithm for FDG-PET images using CaLM Graduate School of Health Science, Juntendo University Junpei Suzuki P-094. Development and Application of 3D Anatomy Educational Material via Metaverse and XR for Remote Telemedicine Training Yonsei University College of Medicine DongHyeok Choi P-095. Establishment of a Lymphoma Quantitative Evaluation System using Radiomics in PET/CT images Yonsei University College of Medicine DongHyeok Choi P-096. Development of Two-Layer DOI Detector With a Light Guide Inserted Between the Layers Dongseo University Seungjae Lee P-097. Comprehensive image quality comparison of conventional and new flat panel detectors under bedside-radiography beam conditions Gunma Prefectural College of Health Sciences Sho Maruyama P-098. Experimental Study of Correlation between Exposure Index and Noise on Chest Radiography at Different Tube Voltages Department of Health Sciences, Faculty of Medical Sciences, Nobukazu Tanaka Kyushu University P-099. Hybrid Approach Integrating Radiomics and Deep Learning from CT Scans for Histological Subtype Classification of NSCLC Department of Bioengineering, Korea University, Seoul, Republic of Korea Geon Oh P-100. Performance Evaluation of Automatic Segmentation based on Deep Learning and Atlas according to CT Image Acquisition Conditions. Konyang University Hospital, Department of Radiation Oncology Jongwon Kim P-101. Evaluation of HU values in MRI-based synthetic CT on planning quality in proton therapy Chungbuk National University Hospital Byung Jun Min P-102. Optimizing Adaptive Radiotherapy in Breast Cancer Patients Using Synthetic CT for Accurate Dose Evaluation Ewha Womans University Computational Medicine Soeun Choi P-103. Development of xSPECT Radiomics Model for Differentiating Metastasis and Benign Bone Diseases Using Principal Component Analysis Ewha Womans University Computational medicine Soeun Choi P-104. Automatic Segmentation and Contrast Enhanced Images Generation for HCC on CT images using Deep Neural Networks Fukui Prefectual Hospital Proton Therapy Center Yoshikazu Maeda P-105. Study of auto segmentation accuracy using a transferred U-net for CT-image guided prostate cancer proton treatment Fukui Prefectual Hospital Proton Therapy Center Yoshikazu Maeda P-106. Prediction of Patient Anatomy from the Surface for Surface-guided Radiotherapy Yonsei University College of Medicine Younghun Yoon P-107. AI Segmentation Model Specialized for a Single Institution Korea University YouSun Ko P-108. Boosting Medical Image Quality with Knowledge Distillation in Diffusion Models for Imbalanced **Datasets** KAIST Joonil Hwang

P-091. Evaluation of the usefulness of Brain-Age-Gap as a biomarker for brain dementia diagnosis

P-109. Feasibility Analysis for Predicting Lung Cancer Overall Survival Using Radiomic Features Extracted from Multi-Modal Medical Images

Proton Therapy Center, National Cancer Center Meangee Kim

P-110. Evaluation of the device-dependent impact of single-device data on an automated segmentation model based on generalized data sets.

Department of Bio-medical Engineering, Korea University,

Seoul, Republic of Korea Hyeongjin Lim

P-111. Memory Consumption Reduction in 3D U-Net for Medical Image Segmentation Using Patch-Based Method

Teikyo University Masaya Matsuki

P-112. Development of a database and analysis environment for quality management in high-precision radiotherapy

Showa University Graduate School of Health Sciences Taichi Wada

P-113. High-dimensional Data Visualizer: An integrated toolbox of visualizing high dimensional medical data

Teikyo University

Yifei Li

P-114. A review of radiotherapy and fertility using problem-solving therapy approach
Faculty of Health Sciences, Okayama University Medical School,

Okayama University Yuiko Kato