# The 4th ICRPT
# List of accepted abstract

| Reg. No. | Presentation title |
|---|---|
| 20001 | A novel algorithm for generating virtual high-contrast images based on X-ray attenuation analysis using an energy-resolving photon-counting detector |
| 20002 | Facilitating CT dose reduction for patients undergoing serial SPECT/CT imaging during ^{177}Lu DOTATATE therapy |
| 20003 | Discussion on the value of image fusion based on artificial intelligence |
| 20004 | Improvement of normalization of MRI to estimate pathological grade of prostate cancer by local radiomics |
| 20005 | Feasibility of protocol optimization for CT coronary angiography using a commercial pulsating cardiac phantom |
| 20006 | Assessment of vascular endothelial injury in rat models of unilateral carotid artery injury using 4D-flow MRI |
| 20007 | Evaluation of recognition and utilization level for national diagnostic reference levels |
| 20008 | Evaluation of effective dose on dental cone-beam CT using PC based Monte Carlo simulation |
| 20009 | Cross calibration analysis of dual-energy X-ray absorptiometry on the same model bone densitometry system |
| 20011 | Automated approach for the stratification of stroke patients based on radiomic features |
| 20012 | Machine learning approaches for kidney diagnostics using SPECT imaging |
| 20013 | Evaluating organ-specific radiation doses in neonatal incubator X-ray procedures using Monte Carlo simulation |
| 20014 | CT channel by using 3D modeling phantom evaluation of the usefulness of the wide detector |
| 20016 | A study of the minimization of exposure conditions during AP and lateral imaging of the lumbar spine in a digital radiography system |
| 20017 | Distribution measurement of spatial dose by position of medical staff in intervention procedure |
| 20018 | Magnetic resonance imaging on metal artifacts a comparative study of 2D, 3D images |
| 20019 | Study on anode heel effect in digital radiography system |
| 20020 | A study on the dose distribution of photoneutrons according to the patient's treatment direction in radiation therapy |
| 20021 | Evaluation of PET image change according to CT attenuation map of various pitch conditions |
| 20022 | Conceptual design of a static gantry system |
| 20023 | Initial investigation of triple negative detection in breast MR images using a multi-slice multi-phase vision transformer |
| 20024 | Conditional diffusion model-based image transformation of MR sequences in MR-guided radiotherapy |
| 20025 | TAILOR-TS system: tailored tumor segmentation system with facility-specific semi-supervised learning |
| 20026 | The appropriateness of the linear-quadratic model in predicting hypofractionated radiotherapy dose response for photon and proton irradiation |
| 20027 | Effective atomic number score in calcified plaque evaluation: approach using photon-counting CT |
| 20028 | In-house automatic evaluation of artificial intelligence image reconstruction algorithms in CT |

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| 20029 | Preliminary study on an automated detection scheme for pediatric forearm fractures in X-ray images using Open CLIP |
| 20030 | Generation of lung nodule images from image findings using latent diffusion model |
| 20031 | A review on alternatives for sedation in children's MRI: systematic approach |
| 20032 | The effect of minimum monitor units (MMU) on the quality and delivery efficiency of proton therapy |
| 20033 | Development of diagnostic support software for intracerebral hemorrhage detection and elapsed time estimation using multi-sequence magnetic resonance images |
| 20034 | The correlation between the Hounsfield unit and bone mineral density to predict osteoporosis in patients |
| 20035 | Development of remote-operating neutron spectrometer for QA in BNCT irradiation field |
| 20036 | The radiotherapeutic technology proposal aimed at its optimization for hepatocellular carcinoma using biomarkers |
| 20037 | Stopping-power ratio evaluation for proton therapy planning based on dual-energy CT |
| 20038 | Safety check and dose evaluation of a commercial dual-energy CT stopping-power ratio software for proton planning in the treatment planning system |
| 20039 | Determination of phantom materials for a CT/MRI-corresponding anthropomorphic multimodal male pelvic phantom for end-to-end test in MR-guided online ART |
| 20040 | Noninvasive detection of EGFR gene mutations using electron density images from dual-energy CT |
| 20041 | Target position estimation based on diaphragm motion using respiratory-phase-adjusted variable offset vectors for markerless tumor tracking radiotherapy |
| 20042 | Considering stable and unstable breathing PET counts during the steady state method |
| 20043 | The effect of grid focus distance on chest posterior radiography using an automatic exposure control system |
| 20044 | Prediction of CT tube service life based on tube filament |
| 20045 | Radiation dose reduction accelerated with deep learning reconstruction for temporal bone regions in ultra-high-resolution CT imaging |
| 20046 | Cherenkov light imaging for lutetium oxodotreotide |
| 20047 | Relative biological effectiveness (RBE) study at different depths of proton spread-out Bragg peak |
| 20048 | Deep learning based automatic body weight estimation from postmortem computed tomography scout views |
| 20049 | The absorption dose and secondary tumor risk induced by different imaging methods in image-guided radiotherapy |
| 20055 | Blockchain enhanced particle radiotherapy: a cross-platform secure data sharing platform for particle radiotherapy scenario |
| 20057 | Robustness evaluation of using aperture shape controller in postmastectomy radiotherapy (PMRT) using VMAT |
| 20058 | Effectectiveness of radiation dose optimization on patient radiation dose obtained from traumatic carotid-cavernous fistula endovascular treatment. |
| 20059 | Microscintillator for dosimetry of proton microbeam |
| 20060 | Evaluation of maximum measurable dose rate of a plastic scintillator detector for FLASH carbon ion beam dosimetry |
| 20061 | Organ dose measurement for filament material-based head and neck coronal 3D-printed phantom with dosimetry and Monte Carlo code |
| 20062 | Characteristics of patients with allergy-like reactions to iodinated contrast media undergoing computed tomography at a super-tertiary care hospital |
| 20063 | Exploring radiographers' divergent approaches to infection prevention and control in CT: a think-aloud study |

| 20064 | Automatic segmentation of large gross tumor volumes based on hierarchical vision transformer model for radiotherapy patients with stage III NSCLC |
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| 20065 | Multi-task scheme for image findings generation and classification in chest CT: a comparative study of image captioning models |
| 20066 | Focal dose-averaged linear energy transfer boost for prostate carbon-ion radiotherapy: a planning study |
| 20067 | Preventing abnormal safety events in MRI examinations using the HFMEA method |
| 20068 | Hindfoot alignment view versus long axial radiographic view |
| 20069 | Interpretation of survival predictors by CT-based radiogenomics for serous ovarian cancer |
| 20070 | Patient setup guide using AR technology for radiation therapy |
| 20071 | Assessment of point dose and proton range in Monte Carlo vs. pencil beam algorithms for proton therapy treatment planning system |
| 20073 | Novel procedure to derive relationship between surface and internal doses taking into consideration X-ray incident direction during helical CT examinations |
| 20074 | Assessment of radiation dose and factors influencing it in mammography: a single-center study |
| 20075 | Innovative use of shared decision-making and patient decision aids to enhance treatment selection for chronic low back pain |
| 20076 | Study of calculating shielding wall thickness in Cyclotron room |
| 20077 | Comparison of international standards for quality control in digital breast imaging systems: a focus on Korea, Japan, and the United States |
| 20079 | Comparative evaluation of image indicators by PET/CT equipment |
| 20080 | Compare MRI cardiac scanning in China and Japan |
| 20082 | N-dimensional persistent homology for identification models of epidermal growth factor receptor mutation characterized on CT images of patients with non-small cell lung cancer |
| 20083 | Novel mathematical models for tumor growth trajectories in breast cancer patients during neoadjuvant chemotherapy |
| 20084 | Impact of threshold value for maximum standardized uptake value on pretreatment FDG-PET-based prediction models for recurrence in patients with lung cancer prior to SBRT |
| 20085 | Comparison of commercially available statistical iterative CT reconstruction algorithms from different vendors for performance evaluation of low-contrast detectability in pediatric brain |
| 20086 | Efficient deep learning segmentation model with small training dataset for three-dimensional automatic measurement of gross tumor volume diameters of lung cancer on planning CT images |
| 20087 | Calibration of high-dose rate brachytherapy source (iridium-192) using well-type ionization chamber and high-dose-rate remote afterloading brachytherapy machine |
| 20088 | Verification and calculation of shielding for 50 kVp high-dose rate (HDR) electronic brachytherapy commissioned at Gonoshasthaya cancer hospital and research centre |
| 20089 | Feasibility study of spot scanning by MeV electron beam convergence control using electromagnets |
| 20091 | Development of deep learning-based diaphragm suppression technique through in-silico approach |
| 20092 | Evaluation of optimal rigid body registration algorithms for portable body surface monitoring devices |
| 20093 | Application of virtual monochromatic images in quantitative computed tomography to reduce the measurement error of bone mineral density: a phantom study |
| 20094 | Evaluation of adverse reactions and trends in contrast agent use in CT imaging: a single-center data development study |
| 20095 | Evaluating the suitability of exposure index as a patient dose monitoring tool in portable abdominal radiography |
| 20096 | Comparative evaluation of organ dose and image quality in kilovoltage CBCT imaging systems on an O-ring linear accelerator |

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| 20097 | Evaluation of robustness of MR-based prediction models of epidermal growth factor receptor mutations in metastatic brain tumors using coefficient of variation |
| 20098 | Micro-CT assessment of *Nostoc commune* extract's biological effects on osteoporosis models |
| 20099 | ResNet-based exposure index (EI) prediction model using chest radiographs: A single institution study |
| 20100 | Utility of total-body PET in monitoring carbon ion therapy: demonstration in rat |
| 20103 | Exploration of the role and mechanism of proton beams in radiotherapy-resistant cells |
| 20104 | Normal tissue complication probability model for acute oral mucositis in patients with head and neck cancer undergoing carbon ion radiation therapy: based on dosimetry, radiomics, and |
| 20105 | Radiotherapy resistance of Hsa_circ_0000337 and its encoded proteins in esophageal squamous carcinoma cells |
| 20106 | Dosimetry benefits of adaptive radiotherapy in carbon ion radiotherapy for locally advanced non-small cell lung cancer: a comparative analysis of tumor coverage and normal tissue protection |
| 20107 | Evaluation of biological equivalent dose-based treatment planning in head and neck region |
| 20108 | Fast brain perfusion quantification using second-order motion-compensated diffusion imaging with phase-contrast |
| 20109 | Impact of $^{89}$Zr decay properties on image quality and quantitative accuracy in PET |
| 20111 | Monte Carlo simulation-based calculation of conversion factor for effective dose using Korean national computed tomography dose index registry |
| 20112 | Optimization of light-ion quantum molecular dynamics model for nuclear fragmentation in proton therapy |
| 20114 | Visualization of scattered radiation sources during X-ray CT examinations using a high-sensitivity CMOS camera |
| 20115 | Comparison of doses for custom-made phantoms and acrylic phantoms with varying thicknesses in breast stereotactic biopsy |
| 20116 | Measurement method using acrylic phantom for quality assurance of BNCT procedure |
| 20117 | Image quality enhancement of small FOV cone-beam CT by using a generative model |
| 20118 | Fundamental study on optimal contrast media concentration in CBCT after WEB implantation for cerebral aneurysm |
| 20119 | Evaluation of deep learning-based segmentation models for cerebral hemorrhage detection in postmortem computed tomography |
| 20120 | Synergistic reconstruction method for PET and Compton imaging of whole gamma imaging |
| 20121 | A one-ring prototype of hemispherical brain PET with novel TOF-DOI detectors |
| 20122 | Comparative dosimetry study of PARaDIM with ICRP Publication 128: calculation of organ and effective doses from 18F-FDG radiopharmaceutical |
| 20124 | Short-term changes in volumes, $T_2$, and diffusion parameters of tumor and peritumoral edema after embolization in supratentorial meningioma |
| 20125 | Impact of long-term step trajectories on weight loss |
| 20126 | Development of an AI chatbot for radiotherapy using retrieval-augmented generation |
| 20127 | Accuracy of patient-specific deep learning for markerless tumor tracking; some comprehensive tests using lung phantoms and radiochromic films |
| 20128 | Classification of postmortem computed tomography images for cerebral hemorrhage detection using deep learning |
| 20129 | Development of radiation protection educational material by augmented reality during angiography with user's opinion |
| 20130 | Real-time imaging of scattered radiation sources during X-ray fluoroscopy using a portable radiation visualization camera |

| 20131 | Development of deep learning-based dental implant segmentation model and analysis of panoramic image preprocessing effects |
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| 20132 | Development of a PCA-based post-processing algorithm for individual teeth segmentation in dental X-ray images |
| 20133 | Respiratory reproducibility evaluation of a surface motion phantom for SGRT |
| 20134 | Automatic alveolar bone loss segmentation model on panoramic dental radiograph images |
| 20135 | Estimation of age using alveolar bone loss with integrating deep learning for identity recognition and biological aging analysis |
| 20136 | Deep learning model for multi-class alveolar bone loss semantic segmentation on panoramic dental radiograph images |
| 20137 | Investigate the contribution of scattered radiation from each source at the operator's position using Monte Carlo simulation |
| 20138 | Evaluation of conventional and PCA-based feature selection method of multi-omics prediction model for radiation pneumonitis in NSCLC Stage III patient |
| 20139 | Tumor-specific circRNA-derived antigen peptide identification for esophageal squamous cell carcinoma |
| 20140 | Generating parallel optical path in in-air readout optical computed tomography |
| 20141 | Evaluation of the 3D convolutional neural network approach for automated VMAT plan creation in head and neck cancer patients |
| 20143 | Performance evaluation of Mirai-PET: a high-resolution and large FOV small animal PET with TOF-DOI detection |
| 20144 | Development and demonstration of a radiation-resistant dual-layer hybrid dose distribution detector utilizing Cherenkov and scintillator light |
| 20145 | Differentiation of tumor budding grade of colon cancer using noise-optimized virtual monoenergetic image in dual-energy computed tomography |
| 20146 | Differentiation of malignant grade of non-mucinous pulmonary adenocarcinomas in subsolid nodules using enhanced dual-energy computed tomography |