

**Patient QA**  
Featuring PerFRACTION™

PO-GPV-T-217  
[Analysis of Characteristics of Phantomless Patient-Specific Quality Assurance Using PerFRACTION™](#)  
*Jungsuk Shin, et al, Samsung Medical Center, Korea*

PO-GPV-P-27  
[Impact of Intra-Fractional Motion on Dose Distribution and Converge for IMRT Breast Cancer By Using PerFRACTION™](#)  
*I-Ting Lin, et al, University of Mississippi Medical Center, Jackson, MS*

SU300-GPD(A)-LOUNGE-416  
[Patient-Specific QA of Hyperarc SRS Plans for Complex Cases with Multiple Brain Metastases](#)  
*Zhilei Liu Shen, PhD, et al, Keck School of Medicine of USC, Los Angeles, CA*

TU300-GPD(B)-LOUNGE-533  
[Assessment of Sensitivity of a Commercial Epid-Based in-Vivo Dosimetry Module for Head and Neck VMAT Treatment: A Phantom Study](#)  
*Ananta Raj Chalise, PhD, et al, Cleveland Clinic, Cleveland, OH*

- **Conclusion:** “Commercially available EPID-based in-vivo dosimetry software was able to detect deviations pertaining to a possible HN mistreatment such as wrong bolus thickness, misplacement of bolus, or incorrect shoulder positioning. This tool can be useful in making informed decision for adaptive replanning when applying for real patient treatments.”

**Patient QA**  
Featuring ArcCHECK®

SU300-GPD(A)-LOUNGE-511  
[Comparison of Two Detector Array Phantoms for Patient-Specific Quality Assurance of Stereotactic Body Radiation Therapy Plans with Flattening Filter-Free Beams](#)  
*Christopher Ryan Peeler, PhD, et al, The University of Texas MD Anderson Cancer Center,*

PO-GPV-T-86  
[Enhancing Patient-Specific QA for the Varian Ethos Platform: A Comparative Study of 3D Array- and Log File-Based Methods](#)  
*Yulun He, et al, University of Washington*

TU300-GPD(B)-LOUNGE-486  
[Challenges and Insights from a Year of Delivery Log-File Analysis for Patient-Specific QA in a Multi-Vendor Linac Enterprise](#)  
*Gweneth Andersen, et al, Massachusetts General Hospital*

**Patient QA**  
Featuring ArcCHECK®

PO-GPV-T-84  
[Mixed-Resolution, Multi-Material, Geometry-Optimized VMAT Quality Assurance Via Nested Detector Arrays](#)  
*Sarah E Holler, et al, Department of Radiation Oncology, University of Kansas Medical Center*

PO-GPV-T-251  
[A Comparative Study of Patient Specific QA for VMAT Eclipse and Pinnacle Treatment Plans Delivered Using Elekta Linear Accelerators](#)  
*Tawfik G. Giaddui, et al, FCCC at Temple University Hospital*

SU300-GPD(A)-LOUNGE-315  
[A Novel VMAT Complexity Metric to Predict Treatment Delivery Accuracy](#)  
*Elijah Clay Nordhorn, et al, University of Tennessee*

SU300-GPD(A)-LOUNGE- 511  
[Comparison of Two Detector Array Phantoms for Patient-Specific Quality Assurance of Stereotactic Body Radiation Therapy Plans with Flattening Filter-Free Beams](#)  
*Christopher Ryan Peeler, et al, The University of Texas MD Anderson Cancer Center*

TU300-GPD(B)-LOUNGE-326  
[Impact of Plan Complexity on the Local-Recurrence-Free-Survival of NSCLC Patients Treated with SBRT: A 6-Year Retrospective Study](#)  
*Shutong Yu, et al, Institute of Medical Technology, Peking University Health Science Center*

**Patient QA**  
Featuring ArcCHECK-MR

PO-GPV-T-248  
[Analysis of Total Composite and per-Field Patient Specific QA on MRI-Unity](#)  
*Michael G. Snyder, et al, Department of Radiation Oncology, Corewell Health William Beaumont University Hospital*

TH200-502A  
[Feasibility of Using Alternative Treatment Planning and Motion Monitoring Systems in MR-Guided Online Adaptive Radiotherapy Workflows](#)  
*Eric S. Paulson, PhD, et al, Department of Radiation Oncology, Medical College of Wisconsin, Milwaukee, WI*

TU300-GPD(B)-LOUNGE-240  
[Is Calculation-Based PSQA Sufficient for MR-Guided Online Adaptive Radiotherapy?](#)  
*Ruiqi Li, et al, UT Southwestern Medical Center*

**Patient QA**  
Featuring ArcCHECK® & Enhanced Dynamic Platform

PO-GPV-T-7  
[A Phantom Study Evaluating Biology-Guided Radiotherapy \(BgRT\) Delivery Accuracy in Response to Dynamic Respiration](#)  
*Andrew Groll, PhD, et al, RefleXion Medical, Hayward, CA*

SU300-GPD(A)-LOUNGE-331  
[Strategies to Delineate Scintix Biology-Guided Radiotherapy \(BgRT\) Targets Under Motion](#)  
*Timothy Pok Chi Yeung, PhD et al, RefleXion Medical, Hayward, CA*

SU300-GPD(A)-LOUNGE-204  
[Experimental Validations of Two Different 4D Dynamic Dose Calculation Methods for Free Breathing in Proton Pencil Beam Scanning](#)  
*Yuki Tominaga, PhD, et al, Osaka Proton Therapy Clinic, Osaka, Osaka, Japan*

TU300-GPD(B)-LOUNGE-138  
[Patient Specific Quality Assurance on a Moving Phantom – a Novel Platform, SNC Motioncheck 3D for Use with Accuray Radixact Synchrony Real-Time Target Tracking Radiotherapy](#)  
*Roland Teboh Forbang, PhD, et al, Hackensack University Medical Center, Hackensack, NJ*

- **Methods:** “PSQA involving 3 different real-time tumor tracking deliveries were performed on a moving ArcCHECK phantom mounted on the enhanced dynamic platform. One of the plans used fiducial tracking with respiratory motion correlation while the other 2 plans used lung tracking with respiratory motion correlation. A representative 3D motion was programmed on the dynamic platform using its 11.3-degree wedge and 30-degree yaw geometry. Gamma analysis was done on the planned static versus the delivered real-time tracking dose comparing the case where the kV imaging dose was (and was not) included in the measured dose.”
- **Conclusion:** “The novel platform capable of suppressing the non-real kV imaging dose component has the potential to improve the gamma passing rate as was observed here.”

### Stereotactic QA

Featuring SRS MapCHECK® and StereoPHAN™

PO-GPV-T-85

[Use of a High-Resolution Detector Array for Filmless Leksell Gamma Knife \(LGK\) ICON Quality Assurance](#)

*Deepak Shrestha, et al, Mayo Clinic Florida*

PO-GPV-T-194

[Comparison of Independent Dose Calculation and Patient Specific Quality Assurance for Zap-X](#)

*Wenzheng Feng, et al, Hackensack Meridian Health*

PO-GPV-T-108

[To Assess the Efficacy of the Sun Nuclear SRS Mapcheck in Identifying Sub-Millimeter Multi-Leaf Collimator \(MLC\) Positioning Errors during Cyberknife QA Plan Delivery.](#)

*Khushdeep Singh, et al, Overlook Medical Center*

TU300-GPD(B)-LOUNGE-51

[Practice Improvement Using SBRT/SRS QA Results - Gridsize Vs Dosimetric Leaf Gap](#)

*Lalith Kumaraswamy, et al, Novant Health*

PO-GPV-P-72

[Can VMAT be Used for SRS Treatment of Small Lesions <1cm?](#)

*Junliang Xu, et al, Department of Radiation Oncology, University of Maryland School of Medicine*

TU300-GPD(B)-LOUNGE-500

[Dosimetric Impact of Rotational Setup Errors in Stereotactic Radiosurgery with ZAP-X](#)

*Ying Niu, et al, Department of Radiation Medicine, MedStar Georgetown University Hospital*

SU300-GPD(A)-LOUNGE-55

[Comparison of Diode-Based Array Devices with Varying Resolution for Patient-Specific Quality Assurance of Stereotactic Body Radiation Therapy](#)

*Austin M. Skinner, et al, Medical University of South Carolina*

WE-1115-152

[Investigating Enhanced Leaf Model \(ELM\) of Varian HD-Mlc for on- and Off-Axis Dose Calculation Accuracy in Single-Isocenter Multitarget \(SIMT\) Plan Delivery](#)

*Hem Bahadur Moktan Tamang, et al, Department of Radiation Oncology, University of Kansas Medical Center, Kansas City, KS*

### Stereotactic QA

Featuring MultiMet-WL Cube

PO-GPV-P-103

[Multimet-Winston Lutz Tests: Comparison between Linear Accelerators](#)

*Huisi Ai, et al, Indiana University School of Medicine*

### Machine QA

Featuring IC PROFILER™

PO-GPV-P-104

[Proposing a Diffusion Model Simulation of Machine Profile Characteristic to Treatment Delivery Pattern in Radiotherapy](#)

*Kaile Li, et al, Varian Medical System, A Siemens Healthineers Company*

PO-GPV-T-200

[Longitudinal Evaluation of the Integral Quality Monitor for Routine Clinical Quality Assurance of Photon Beams](#)

*Olivia Graham C Valadie, et al, Cedars-Sinai Medical Center*

TU300-GPD(B)-LOUNGE-526

[Commission and Quality Assurance of Halcyon v3.0 Linear Accelerator](#)

*Xiaoyu Sherry Liu, et al, Kaiser Permanente Los Angeles Medical Center*

PO-GPV-T-257

[Optimizing Monthly Quality Assurance Setup of Planar Ion Chamber Array Using Surface Guidance](#)

*Thomas Myron Ritrosky, et al, University of Oklahoma Health Sciences Center*

PO-GPV-T-246

[Cross Calibration between Radiochromic Film and Ion Chamber Measurements for Mobetron Conventional Electron Beam](#)

*Mervat A. Alharbi, et al, Medical Physics Department, School of Medicine and Public Health, University of Wisconsin-Madison*

SU-500-502A

[Commissioning of the Elekta Unity MR-Linac Gating System](#)

*Blake R. Smith, PhD, et al, University of Iowa Hospitals and Clinics, Iowa City, IA*

PO-GPV-T-261

[Development of an Integrated Platform Using Microsoft 365 for Machine Quality Control and Equipment Management in Radiotherapy](#)

*Emily S. Poon, et al, McGill University Health Centre*

### Machine QA

Featuring SunSCAN™ 3D

TU300-GPD(B)-LOUNGE-284

[Reference Chamber-Free Beam Scanning of Small Fields: Characterizing a Novel Pulse Normalization Technology](#)

*Garrett C. Baltz, MS et al, Scripps Health, San Diego*

### HEAR FROM THE AUTHOR

*Monday, July 22, 1:00 PM, Sun Nuclear Booth 1107*

*Wednesday, July 24, 9:45 AM, Sun Nuclear Booth 1107*

### Machine QA

Featuring Electron Density Phantom

SU-430-408B

[A Comprehensive Dual Energy Method for CBCT Metal Artifact Reduction](#)

*Weiwei Ge, et al, Department of Engineering and Applied Physics, University of Science and Technology of China, Hefei, Anhui, China*

PO-GPV-P-101

[What Is the Optimal CT Tube Voltage to be Used in Imaging Bony Anatomy for Radiotherapy Applications?](#)

*Mohamed Bahaeldin Afifi, PhD, et al, Radiological Sciences and Medical Imaging Department, College of Applied Medical Sciences, Prince Sattam bin Abdulaziz University.*