SunCHECK™ Patient

Specifications

General Specifications (applies to all unless noted)	
Browser support	Google Chrome (recommended), IE 11
Meets Reimbursement/Reporting Requirements	Yes
Supported Treatment Modalities	3D CRT, IMRT, VMAT, SRS and SBRT
Plan Quality Checks - PlanCHECK™	
Treatment Planning Systems Supported	Varian Medical Systems® Eclipse™ via Scripting, others via DICOM
Physics Checks	Rules-based checks: Treatment and non-treatment beam verifications, plan parameters, structures and deliverability
Dosimetric Checks	Structure-based checks: Dose/volume metrics with user-definable constraints; complex dosimetry metrics such as: Conformality Index, Conformation Number, Gradient Index and Gradient Measure for multiple structures, plus Homogeneity Index, Inhomogeneity Index and more
Secondary Calculations - DoseCHECK™	
Supported Systems	• Elekta and Varian Medical Systems® Linacs, including Varian Medical Systems® Halcyon™ System • Accuray TomoTherapy Hi-Art®, H-Series™ and Radixact® Systems, including Precision Treatment Planning System • Varian Medical Systems® and Elekta HDR Brachytherapy Systems
Dose Calculation Algorithms	• Conventional Linacs: Collapsed Cone Convolution Superposition • TomoTherapy Systems: Monte Carlo • HDR Brachytherapy: TG-43 compliant algorithm
Available Analysis & Pass/Fail Criteria	• Photon: Composite & Beam Point doses, MUs*, 3D Dosimetric Analysis • Electron: Beam Point doses • HDR: Composite Point doses, Source Information, 3D Dosimetric Analysis
Pre-Treatment QA - PerFRACTION™	
Data Sources	EPID and/or Log Files (dependent on Linac and imaging type used in delivery), and/or ArcCHECK array
Available Analysis & Pass/Fail Criteria	• Composite and Beam Point Doses, 2D Relative Dose Analysis, 3D Dosimetric Analysis • 2D Absolute Dose Analysis (Absolute Dose Option**)
In-Vivo Monitoring - PerFRACTION™	
Dose Calculation Image Set	Planning CT, Cone Beam CT (CBCT Recalculation Option**)
Available Analysis & Pass/Fail Criteria	• Composite and Beam Point Doses, 2D Relative Dose Analysis, 3D Dosimetric Analysis • 2D Absolute Dose Analysis (Transit Dosimetry Option**)

**Varian Medical Systems® and Elekta Linac Plans only, not applicable for TomoTherapy **PerFRACTION Dosimetry Package*

SUN NUCLEAR corporation

SunCHECK™ Machine

Specifications

General Specifications (applies to all unless noted)	
Browser support	Google Chrome (recommended), IE 11
Meets Reimbursement/Reporting Requirements	Yes

Daily, Monthly, Annual QA	
Protocol support	• TG-142 (all 127 tests in tables 1-6) • TG-51 • DIN • Daily QA Support: TG-66, TG-148, TG-135 and 10CFR 35 • Custom templates
Direct Device Connection	Daily QA™3, IC PROFILER™ and Quad Wedges (Optional) and IC PROFILER™- MR

Imaging, VMAT, MLC QA - SNC Machine™	
Imaging Test Support	• Image Quality: CBCT, kV, MV • MLC • VMAT
MLC/ Mechanical	• MLC: Picket Fence, Positioning, Leaf Speed, Hancock • Winston Lutz: Radiation & Machine Isocenter, Hancock • Starshot: Gantry, Couch, Collimator • Light/Radiation Field Congruence
VMAT	• Dose Rate vs. Gantry Speed • Leaf Speed • Arc Point Dose • DMLC Point Dose

Sun Nuclear Phantoms		
MV-QA	Line Pairs (mm):	0.1, 0.2, 0.5, 1.0 ± 0.025
	ROI:	9 (4 spatial, 4 contrast, 1 center)
	Dimensions (cm):	12.7 L x 10.2 W x 2.5 D
kV-QA	Line Pairs (mm):	0.6, 1.2, 1.8, 2.4 ± 0.01
	ROI:	28 (4 spatial, 23 contrast, 1 center)
	Dimensions (cm):	12.7 L x 12.7 W x 1.6 D
FS-QA	Field Sizes (cm):	10 x 10; 15 x 15
	Markers (±0.1mm):	56 - Field size (7 per field edge)
	Dimensions (cm):	17.8 L x 17.8 W x 0.6 D
WL-QA	Dimensions (cm):	6.0 x 6.0 x 6.0
	Sphere Size (mm):	7.0
	Sphere Center Accuracy (mm):	0.2

Additional Phantom Compatibility	
Sun Nuclear	MultiPHAN™, CT ACR 464 Phantom
Standard Imaging	PIPSPro Phantoms
Phantom Laboratory	CatPhan 503, 504, 600, 604
Leeds	TOR 18FG
Varian Medical Systems®	Las Vegas Phantom
PTW	EPID QC Phantom
GE Medical Systems	GE Daily Phantom

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