BEAMSCAN®
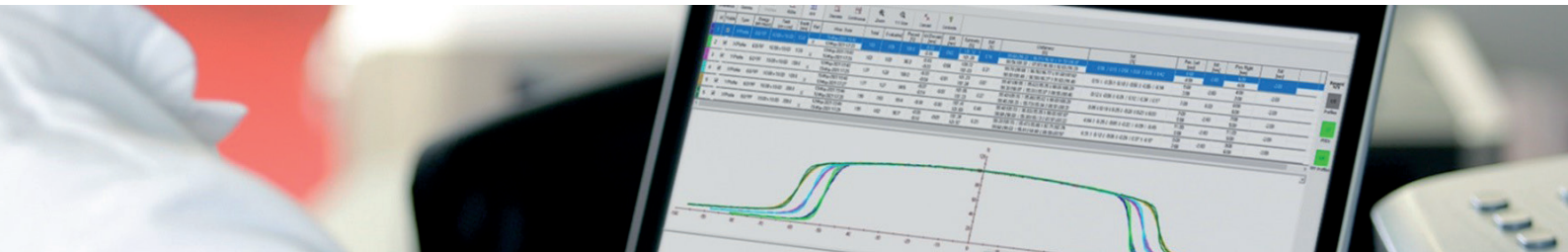
Software Tools and Functionalities

General Settings

▶ Access and effectively manage all detectors in one location.
▶ Manage your treatment machines and settings conveniently in one place.
▶ Use predefined or customized task lists to automate beam data collection.
▶ Define steps and speed settings to obtain comparable data.
▶ Create or customize dosimetry protocols.
▶ Define clinical quality criteria for data comparison.

Setup

▶ Reduce setup time with BEAMSCAN Auto Setup.
▶ Choose wireless setup and data transfer via WiFi to facilitate operation.
▶ Automatically adjust your measurement position (EPOM, axis, manual).
▶ Easily change BEAMSCAN setup position to measure half-beam profiles for large fields.
▶ Identify and automatically correct beam inclination (small field sizes).

Beam Data Acquisition

▶ Compare measured data against reference data in real time using a 1D gamma index analysis.
▶ Access analysis results in real time based on the chosen protocol.
▶ Set or adjust optimal scanning speed and resolution.
▶ Use continuous scanning to reduce scan time.
▶ Maximize scanning speed without compromising quality and apply AI-based correction after scanning.
▶ Run the scan time predictor to better manage your measurement schedule.
▶ Control evaporation and automatically adjust the water level for improved accuracy during long measurements.
▶ Repeat a previous measurement at any time with one click.

Special Measurements

▶ Conduct reference dose measurements with BeamDose (optional).
▶ Measure small-field output factors by automatically positioning the detector in the dosimetric field center.
▶ Perform automatic TPR measurements without the need for adjustment.
▶ Adjust beam parameters in real time to immediately detect changes or variations (BeamAdjust).
▶ Automatically calculate measurement depth of profiles based on nominal d_{max} or % PDD value.
▶ Measure planes perpendicular or parallel to the central beam axis.
▶ Perform multiple point dose measurements in one go.

Data Processing

▶ Normalize data to CAX, a specific point, or an absolute value.
▶ Use AI-based functions to correct penumbra distortion and noise (Deconvolve/Denoise).
▶ Smooth your data over a selected region.
▶ Convert PDI to PDD.
▶ Interpolate beam data.
▶ Shift profiles or PDDs.
▶ Merge half-beam profiles.
▶ Mirror profiles.
▶ Create correction tables for depth- or dose-related corrections.

Beam Data Analysis

▶ Analyze beam data according to international or vendor-specific dosimetry protocols.
▶ Compare multiple scans in seconds using 1D Gamma comparison or percentage deviation.
▶ Generate tables for TPR/TMR, OCR and output factors.
▶ Superimpose scans for a quick visual symmetry check.
▶ Calculate TPR/TMR from depth dose measurements.
▶ Determine absorbed dose to water according to IAEA TRS-398 or AAPM TG-51 protocols (optional).
▶ Convert imported scanned or digital images for comparison or quantitative analysis (optional).

Data Handling and Export

▶ Convert DICOM data from your TPS into mcc data format for comparison against water tank measurements.
▶ Format your beam data for easy import into your TPS.
▶ Export your analyzed beam data to Track-it for trending and reporting.
▶ Copy and paste selected data points or entire data tables to Excel, ASCII, etc.
▶ Create PDF reports for sharing and documentation.

Trending and Reporting with Track-it

▶ Quickly access your analyzed beam data via web browser from anywhere in your network.
▶ Automatically monitor your QA tasks and reports on a single platform.
▶ Automate reporting by using predefined or customized protocol templates, e.g., AAPM TG-142 Annual QA.
▶ Show trends of selected data over time and across multiple measurement or treatment devices.
▶ Generate QA reports online or offline, e.g., in vaults without wireless network.
▶ Add attachments to protocol templates, e.g., for guidance on test procedures.

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