FREQUENTLY ASKED QUESTIONS

SRS MapCHECK™: SRS Patient QA, No Film

Q: How will the SRS MapCHECK impact my workflow?

A: The SRS MapCHECK was designed to accomplish patient QA with no film, reducing the time required to perform quality assurance of stereotactic treatments. Relative dose analysis is enabled in SNC Patient version 8.0, and absolute dose analysis will be available with the upcoming release of SNC Patient version 8.1. An internal timing study of three SRS patient QA cases using Gafchromic film revealed a workflow taking upwards of 300 minutes; with the SRS MapCHECK, the same 3 cases required only 20 minutes and resulted in improved relative dose accuracy. Version 8.1 will further reduce QA time as absolute measurements becomes supported by Patient Software, reducing the time for the same three cases to approximately 10 minutes.

Q: What energies are supported?

A: Varian and Elekta 6MV and 10MV energies are currently supported, both with conventional and flattening filter free (FFF) beams.

Q: Why were SunPoint® 2 diodes used for the SRS MapCHECK?

A: The small size of these diodes (active area 0.48 x 0.48 mm) allows the detectors to be placed close together (closest distance center-to-center: 2.47 mm @45° angle).

Q: The ArcCHECK® is recommended over the MapCHECK® for rotational deliveries. Why was the SRS MapCHECK developed as a planar array?

A: The SRS MapCHECK is designed to replace film in the StereoPHAN during the process of patient specific measurements for SRS. Angular corrections have been developed to produce planar results in line with results from film, and therefore meeting TG-218's requirement that angular dependencies be accounted for in 2D arrays. To our knowledge, this is the only stereotactic 2D array on the market with angular corrections applied.

Q: Can the SRS MapCHECK be used in non-coplanar fields?

A: Currently, we support couch angles within +/-45 degrees of nominal position. Beyond 45 degrees, electronic irradiation is possible, potentially compromising product life and measurement accuracy.

Q: Why is the SRS MapCHECK required to be used in the StereoPHAN?

A: The StereoPHAN provides the scatter geometry that has been verified and quantified for accuracy of the angular corrections. In addition, the StereoPHAN adds robustness of positioning that allows for accurate, easy comparisons to chamber measurements.

Q: Can the SRS MapCHECK support multiple mets cases or Stereotactic Body Radiation Therapy (SBRT) treatments?

A: Yes, the only limitation is the size of the detector array. Any treatment that would be delivered to the StereoPHAN™ for quality assurance measurements can be delivered with the SRS MapCHECK in the StereoPHAN.

Q: Is the SRS MapCHECK compatible with CyberKnife®?

A: We have not yet tested the angular corrections for CyberKnife, but CyberKnife compatibility is on our roadmap for future releases.

Software

Q: What software does the SRS MapCHECK use?

A: The SRS MapCHECK uses SNC Patient software, version 8.0 (and beyond).

Q: Does the SRS MapCHECK use the same software as my ArcCHECK/MapCHECK?

A: The SRS MapCHECK uses the newest version of SNC Patient software (8.0 and beyond). Within version 8.0, customers choose the device for operation when launching SNC Patient. For ArcCHECK or MapCHECK users, with earlier versions of SNC Patient and have not renewed their maintenance agreement to receive the latest version, the previous version will be used for those devices (i.e., Patient 7.0 with MapCHECK 3). Users will run 2 versions of SNC Patient until their maintenance contracts are brought up to date. Please contact Sun Nuclear if you would like to move to this current version for your MapCHECK/ArcCHECK as well.

Q: SNC Patient v.8.0 supports only relative dose measurements and analysis for SRS MapCHECK. What is the reason for this limitation?

A: Field sizes less than 20 mm are notoriously difficult to measure because of detector volume averaging. SRS MapCHECK diodes, like other diode detectors, tend to over-respond in small field sizes. Absolute dose measurements and analysis will be supported in version 8.1 with the implementation of field size correction.

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