

FREQUENTLY ASKED QUESTIONS

SRS MapCHECK®

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. Absolute and relative dose analysis is enabled in SNC Patient Software. 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 10 minutes and resulted in improved relative dose accuracy.

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 meet 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: Yes, Vertex fields are supported with the SRS MapCHECK. SRS MapCHECK can accurately measure CyberKnife®, HyperArc, and any vertex fields as clinically delivered.

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.

Lastly, having a cylindrical setup allows the physicist to measure any angle (or multiple angles) within the plan without needing to return to the TPS to export a new plane.

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

A: Yes. SNC Patient v8.4 includes a new QA Setup Tool that provides guidance for ideal setup for Single-Isocenter Multiple-Target (SIMT) cases and provides shifts for when more than one setup is required due to the field being larger than the 7.7 x 7.7 cm detector array.

Q: Is the 2.47 mm detector spacing an advantage for SRS measurements?

A: Yes. With 2.47 mm detector spacing, the SRS MapCHECK exceeds the 2.5 mm spacing that the Nyquist Sampling Theorem states is adequate for all megavoltage beams used in stereotactic treatments. Anything beyond 2.5 mm will most likely result in volume averaging for the small targets often being treated with SRS.

Q: Is the SRS MapCHECK compatible with CyberKnife®?

A: Yes. Film-less, patient-specific QA can be performed for CyberKnife using the SRS MapCHECK as of version 8.3 of SNC Patient.

Software

Q: What software does the SRS MapCHECK use?

A: The SRS MapCHECK uses SNC Patient software, version 8.1 (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 (8.1 and beyond). Within version 8.1, customers choose the device for operation when launching SNC Patient. For ArcCHECK or MapCHECK users, with earlier versions of SNC Patient who 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 to move to this current version for your MapCHECK/ ArcCHECK as well.

