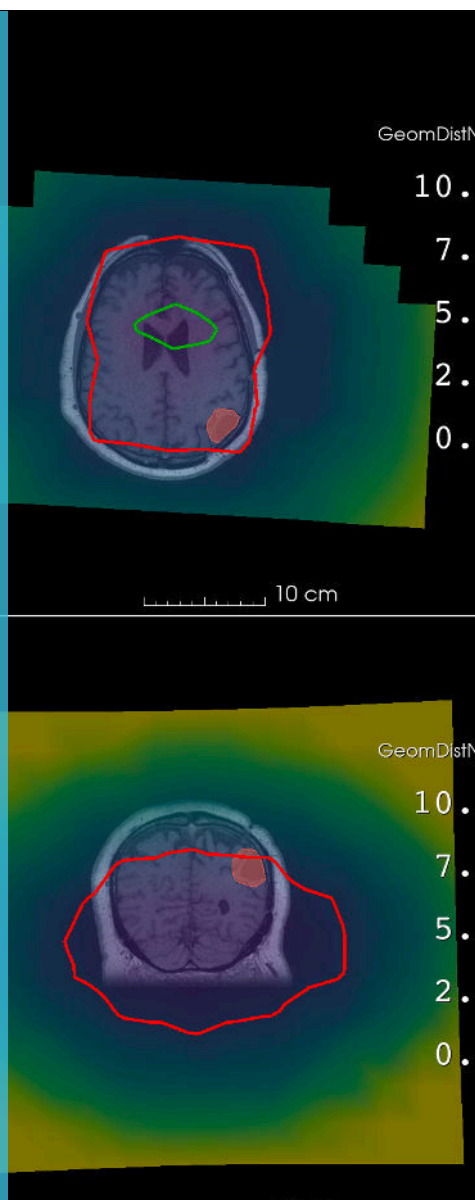# ANALYSIS OF GEOMETRIC DISTORTIONS IN MRI

Spin Up

MRI becomes increasingly accessible in clinical routine, in particular for **stereotactic applications** (surgery, radiotherapy), and in combination with other modalities (PET, linear-accelerators). However, MR images are affected by **geometric distortions** that can reach several centimeters in the most off-centre regions of the field of view.

In order to guarantee a good patient care, it becomes essential to **quantify** and **correct** the distortions on these images.

SUPPORT OFFER

GEOMETRIC DISTORTIONS PACKAGE

PROVISION OF A
TURNKEY SOLUTION

CARTESIAN3D PHANTOM

- Optimized 3D grid for high-resolution
- Distortion assessment
- Large field of view covering

DISTORTION ANALYSIS

- Accurate assessment of machine and sequence-specific distortions
- Cloud-based and automated analysis of the distortions

SPINTK SOFTWARE (RT)

- Overlay of analysis results with patient images
- Corrections of RTStructs contoured on MRI
- Assessment of the dosimetric impact on DVH

Don't wait, trust experts!

Starting from
$6200 ex VAT / year

CHOOSING SPIN UP MEANS...

- Accurately characterize measurement errors
- Detailed analysis and systematic correction of geometric distortions in MRI
- Expertise and support tailored to your clinical needss

Any question? Contact us!
info@spin-up.fr
+33 3 69 09 21 37

CARTESIAN3D PHANTOM

The Cartesian3D was designed to measure geometric distortions induced by gradient non-linearities and main field inhomogeneities. Its optimized cartesian structure allows to cover the entire field of view while ensuring high resolution distortion field.

FEATURES

- Lightweight for easy carrying (2,6kg)
- Optimized grid for full field-of-view coverage (42 x 27 x 36 cm)
- No laser alignment required
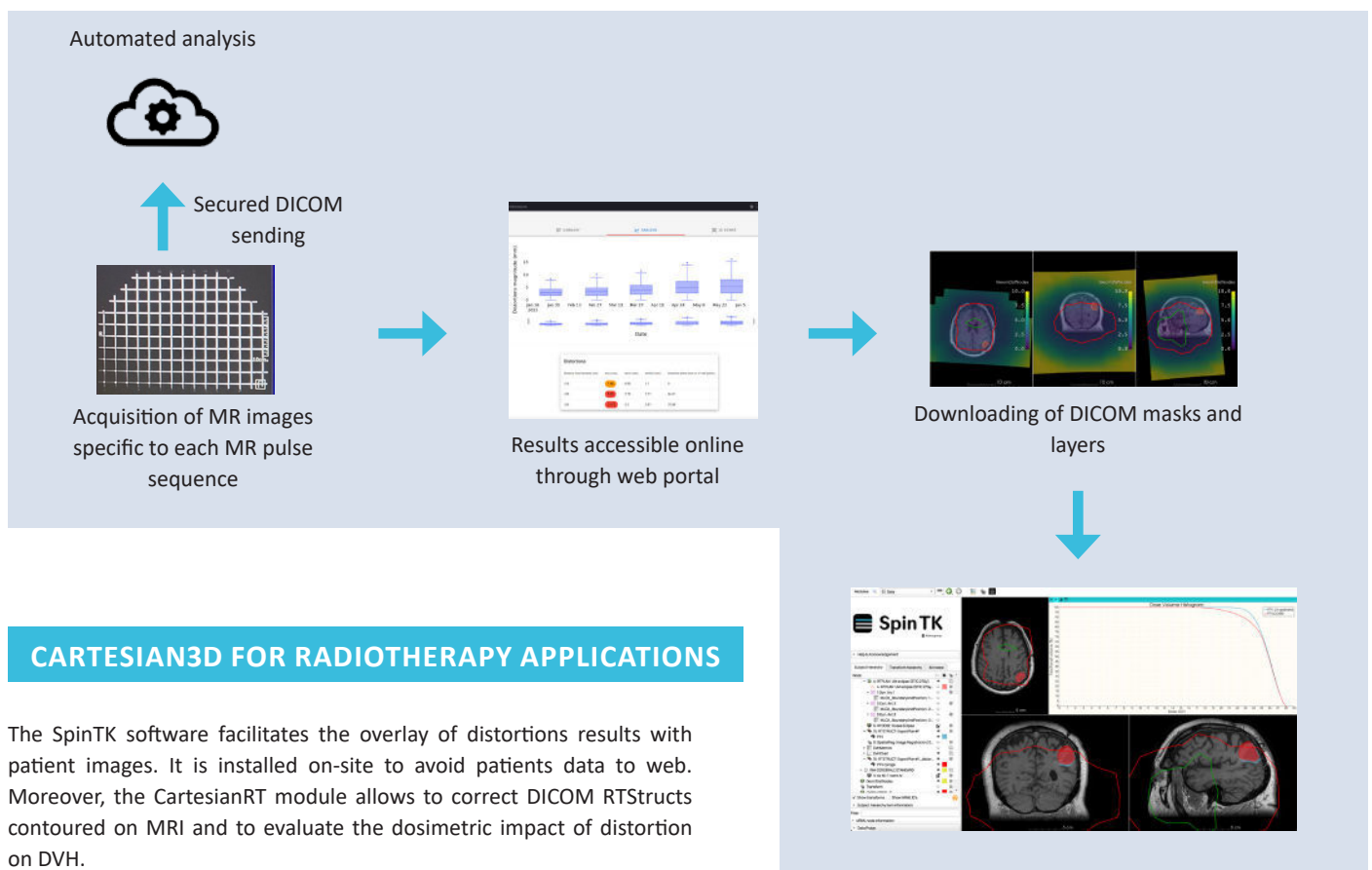- Compliance with AAPM TG284 recommendations
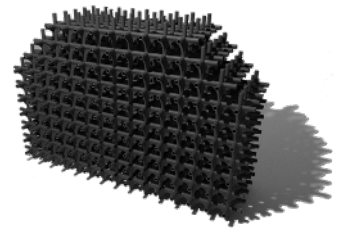
DISTORTION ANALYSIS

MR images are sent to a web server through secured DICOM protocol. They are automatically analysed in only few minutes and distortions results are accessible through an intuitive graphical user interface. Several MR pulse sequences can be compared and quality reports, DICOM distortion field or user-defined contours can be downloaded.

FEATURES

- Automatic software with submillimeter accuracy
- Interactive 3D distortions viewer
- Follow-up of distortion stability over time
- DICOM exports for integration in SpinTK

Automated analysis

Secured DICOM sending

Acquisition of MR images specific to each MR pulse sequence

Results accessible online through web portal

Downloading of DICOM masks and layers

CARTESIAN3D FOR RADIOTHERAPY APPLICATIONS

The SpinTK software facilitates the overlay of distortions results with patient images. It is installed on-site to avoid patients data to web. Moreover, the CartesianRT module allows to correct DICOM RTStructs contoured on MRI and to evaluate the dosimetric impact of distortion on DVH.