Medexprim

Hôpitaux de Toulouse

DaTsoft3D

Study of antiparkinsonian treatment outcome through the evolution of dopaminergic neurodegenerescence

Context

DaTsoft3D® is a quantification tool specialized in evaluating parkinsonian syndromes thanks to the measurements of indexes related to dopaminergic transmission in different parts pf the brain, from DaTscan images (type of nuclear medicine brain exam). The objective of the study was one hand to compare the evolution of measurements between two consecutive DaTscan from two groups of patients, with or without loss of dopaminergic neurons, and on the other hand to evaluate the impact of an antiparkinsonian treatment for the relevant patients. This study required to extract sequences of "tomo" type from exams for 60 patients (2 exams per patient) and route them towards the DaTsoft3D® station.

Radiomics Enabler®: a 3-stage process

1. Select the sequences of interest: after the user entered the search criteria (exam type = DATSCAN + date range), Radiomics Enabler® queries the PACS (DICOM C-FIND) et listed the corresponding DaTscan. The user selected the patients of interest, filtered the series to only keep "TOMO" series, then launched the extraction process ;

2. Extraction: Radiomics Enabler® extracted all sequences (DICOM C-MOVE) and placed them in a shared directory in DICOM format ;

3. Verification + post-processing: From the DaTsoft3D® workstation, the user was able to import the sequences from the shared directory and launch the post-processing.

Testimonial

"Thanks to our collaboration with Medexprim, we saved several months of work. The batch extraction from our PACS of several thousands of images and the routing to our specialized quantification workstation can now be done in just a few hours and automatically."

Pr. Pierre PAYOUX

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