

Uncertainties associated with new AI systems for automatic contouring in radiotherapy

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Introduction

Recent advances in automatic segmentation make it an interesting tool for delineating structures in radiotherapy. This approach would help doctors in their task by providing them with an automatic contour that would serve as a starting point for delineation. The aim of this study is to compare the automatic segmentations produced by different algorithms with the delineations carried out by doctors and available at ICANS in the form of RT-Struct files. The aim is threefold: to determine the level of difficulty of automatic segmentation for different tumour locations and different organs at risk, to determine the uncertainty associated with segmentation in order to compare it subsequently with inter- and intra-physician variability, and to determine the classes of images or structures for which the algorithm fails to create a segmentation or produces an aberrant segmentation. These objectives will enable us to develop in-house experience in systems audit in the field of medical imaging.

The internship will be carried out in the ICANS medical physics unit. The student will have his/her own office with other students, and will be integrated into the team with whom he/she will share moments of conviviality and meals.

→ 6-month, remuneration at the legal minimum