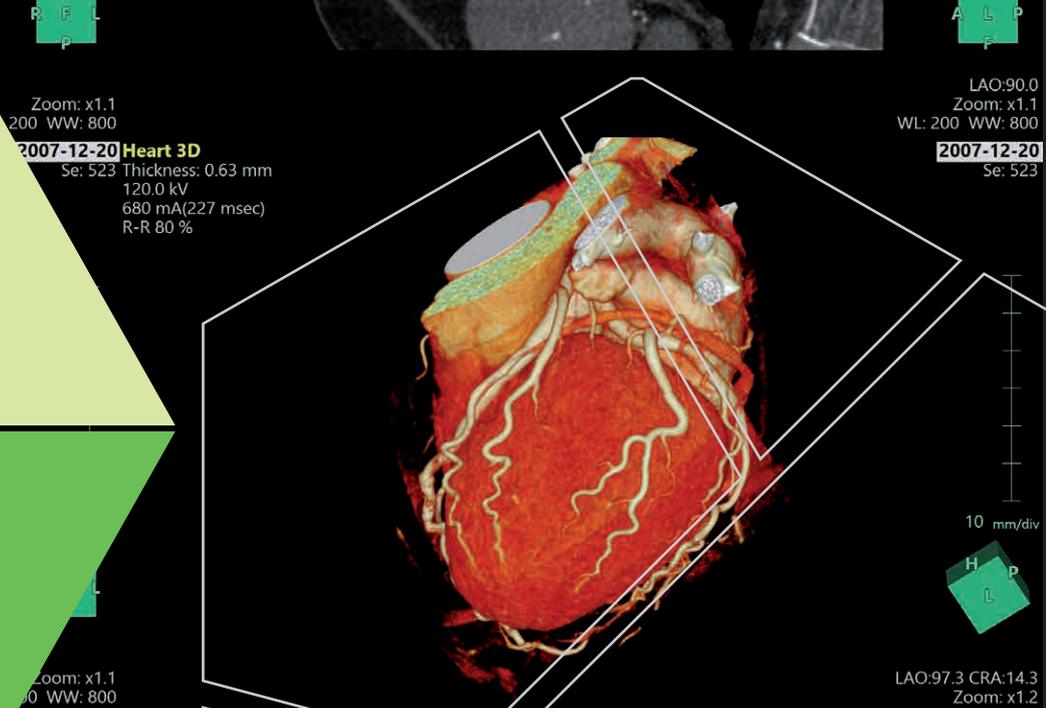


SYNAPSE 3D USER'S VOICE

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Healthcare IT

Synapse 3D

The view of Prof Macchi



Prof. Andrea Macchi

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Introduction

The Iseni Group is a Scientific Institute for Research, Hospitalization and Healthcare whose primary objective has always been public health and wellbeing.

This is reflected not only in the great professionalism and competence of the physicians who work there, but also in the high technology adopted, as well as in the choice of the best medical devices combined with the most innovative software solutions.

For years, Fujifilm has had the honour of collaborating with this important Health Group as a technological partner, having had the possibility of supplying its own medical devices and software solutions, in particular in the field of radiology. The Fujifilm RIS and PACS data and diagnostic image management systems have always supported the physicians and technicians of the Radiology Department in their daily activities, enabling them to work in full digital mode, with optimum performance and response times and above all with the highest diagnostic quality to the benefit of patients and their care.

Given that, in the Iseni Sanità Group, the diagnostic imaging department has next-generation equipment and extremely high-performance data processing systems that ensure a more precise interpretation of the images acquired and processed, it became necessary, in particular, to procure a highly prestigious software like Fujifilm SYNAPSE 3D, which is equipped with the peculiar three-dimensional reconstruction feature.

The 3D feature overcomes the limitations of two-dimensional radiology, that is, the projection of images of any organ, which is three-dimensional, in two dimensions, removing totally the depth and actual three-dimensional reconstruction of the organ.

By overcoming this limitation, it enables, for example, a mass of tissue, stenosis or any formation or neoformation to be assessed in its real dimensions and positions in space, thus allowing, in the cardiological sector, the reconstruction of an aorta, which we had imagined for years to be cylindrical while, in reality, it has a particular ellipsoidal shape, and consequently the optimum construction of a TAVI prosthesis.

In fact, three-dimensional reconstruction for TAVI in CT angiography has been fully supported and used in place of coronary and aortic angiography, which are two-dimensional.

In the pulmonology sector, three-dimensional reconstruction of the lung serves to precisely identify the lobes, the distributions and anatomical variants of the single patient under examination and thus also to locate any mass present precisely and at an early stage.

In gastroenterology, virtual colonoscopy modified according to the Fujifilm SYNAPSE 3D method in some selected patients with a high risk for traditional colonoscopy, or with determinate precise, encoded indications, permits a three-dimensional assessment of any masses of tissue but, above all, diverticula and/or megacolon.

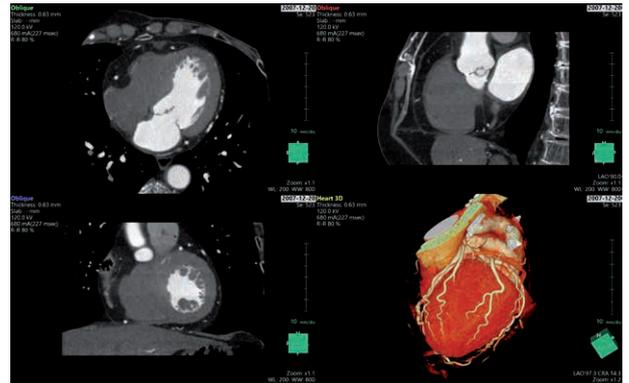
I believe it can be summarized as a precise method of early diagnosis for use in various anatomical positions according to the needs of each individual patient.

In the specific case, our thanks go to Fujifilm in that, when called in by the Iseni Sanità Group specialists, the workgroup has always provided concrete solutions for the improvement and development of new methods in the

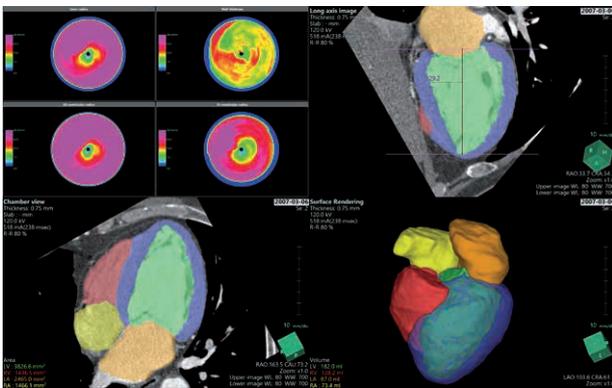
field of diagnostic imaging, general surgery and vascular surgery, etc., allowing us to be at the forefront of the specific field.

Now there is much talk about a world that is about to emerge in the field of medical diagnosis, that is, 3D printing.

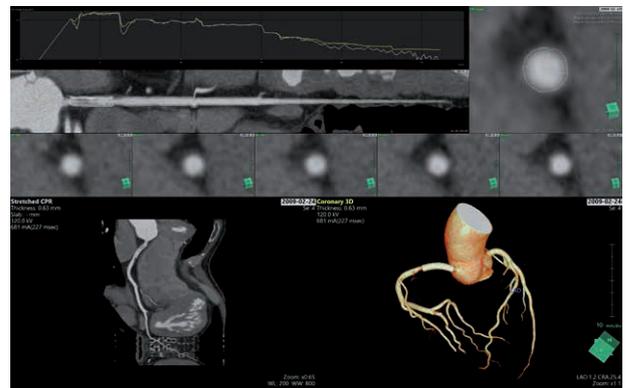
It is therefore to be hoped that this SYNAPSE 3D system and 3D printers will lead, one day, to the construction of fully personalized devices and prostheses.



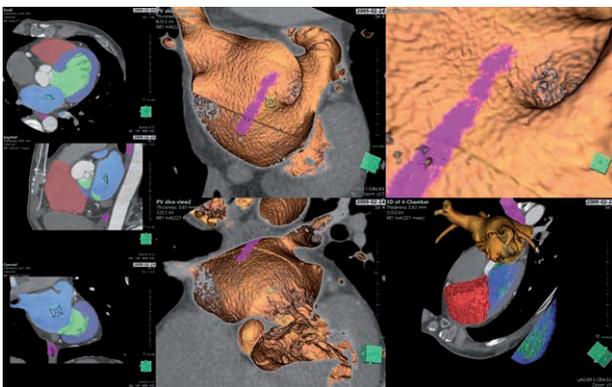
Synapse 3D Coronary Analysis - Heart extraction



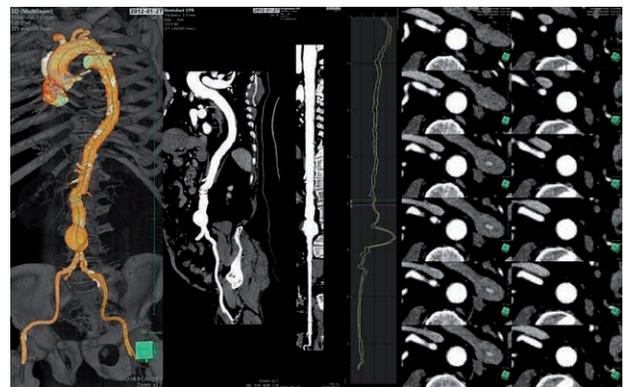
Synapse 3D 4 Chamber Analysis



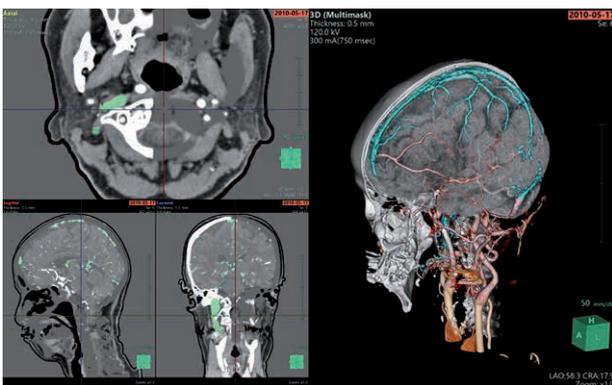
Synapse 3D Coronary Analysis



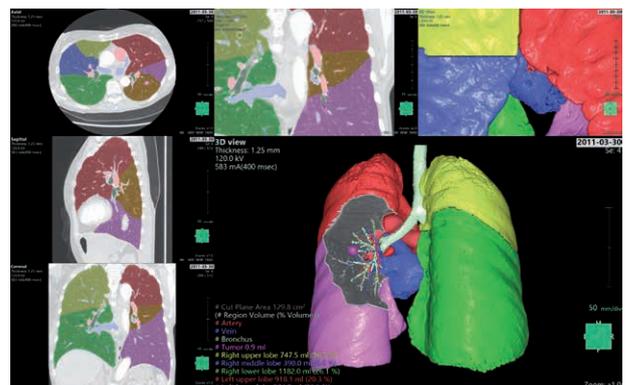
Synapse 3D Cardiac Ablation



Synapse 3D Vessel Analysis - Automatic Extraction of Aorta



Synapse 3D - 3D Viewer



Synapse 3D Lung Analysis Resection