

# Программное обеспечение GIOTTO RAFFAELLO

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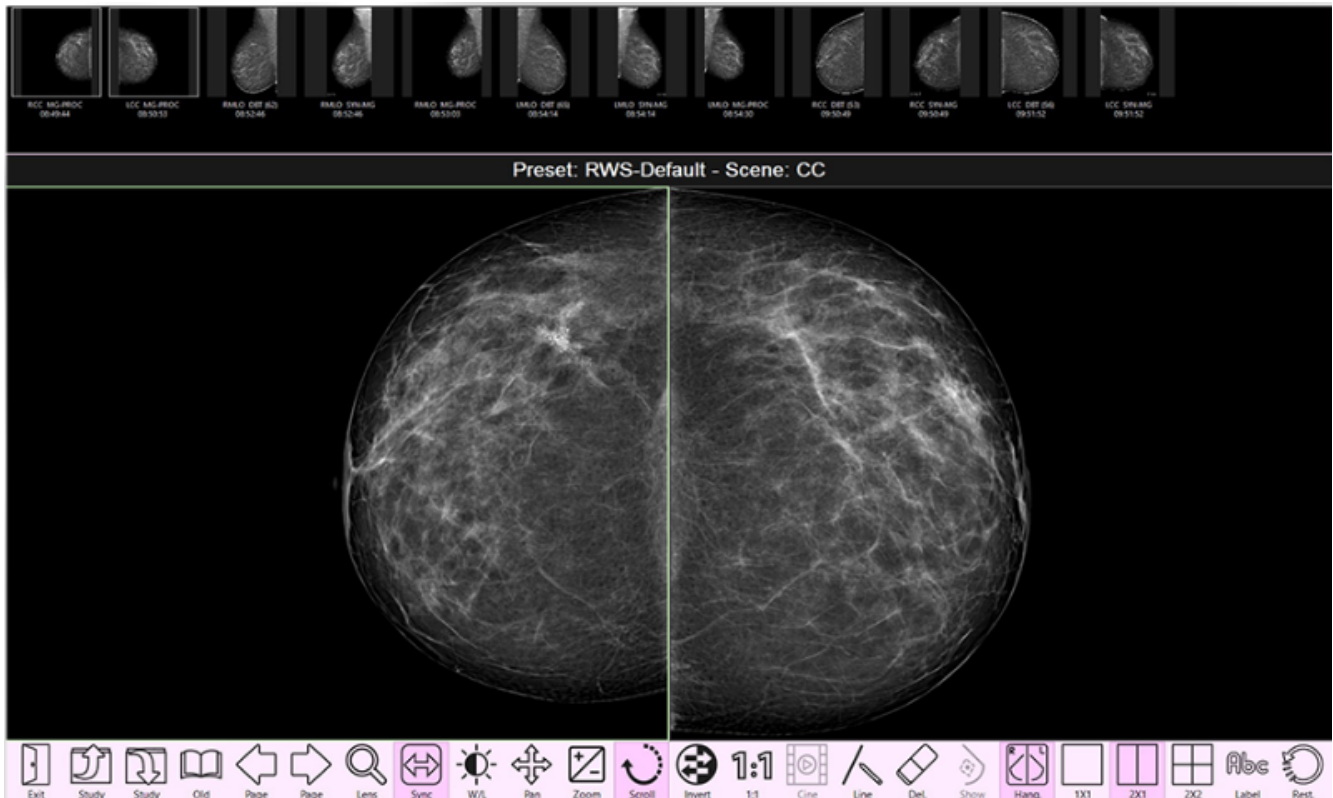
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# RAFFAELLO SOFTWARE

RAFFAELLO is the fully integrated imaging solution developed in-house by IMS Giotto. This modular software, available on all our digital systems, is the result of continuous development over the last two decades, based on technological improvements and feedback received from partners worldwide.



## User-friendly interface

An intuitive and complete graphic interface makes the Raffaello software the ideal tool for both acquisition and reviewing of breast imaging, and the best solution for image-guided biopsy.

Clear button icons highlight the commands for the most frequent operations according to the main intended use, so to avoid unnecessary clicks and ensure a smooth workflow.

Navigation tools (as the icon bar, the DBT slice navigation icon, and the virtual needle position) as well as status tools (as the connection status bar, the DICOM Queue and the Reconstruction Queue) guide the customer through the optimal use of the system.

Single monitor interface, with or without touchscreen capability, or multiple monitor interface: any layout is available with optimized options.

Customized acquisition and reviewing protocols further improve the customer experience.

RAFFAELLO Software is available on Giotto IMAGE 3DL, GIOTTO CLASS, GIOTTO CLASS S, GIOTTO IMAGE PRONE BIOPSY SYSTEM and GIOTTO CLASS PRONE BIOPSY SYSTEM.



## Efficient workflow

The fast system start-up allows quick and easy access for the operator. The complete integration with the RIS system provides easy access to the patient's clinical information from the hospital worklist. The automatic isocentric positioning minimizes the adjustment of the system position in between views for a single patient. Efficient processing algorithms ensure an almost immediate display of the clinical images for positioning review. Dedicated options improve the workflow for the acquisition in all modalities, as well as the image sharing with other DICOM entities.

For example,

- In FFDM
  - Guided acquisition and analysis of Advanced Quality control
- in DBT
  - dedicated reconstruction queue to verify the status of the processing
  - simultaneous support of BT and CT SOP classes for automatic sending at different destinations
- in CESM
  - automatic calculation of the injection bolus based on the patient's weight
  - embedded timer to monitor of the time from the injection



## Fully integrated

The perfect incorporation between RAFFAELLO and the imaging device allows the operator full control of the system through a single software interface displayed on the AWS for a better and safer experience.

All the exam parameters (like exposure settings and system positioning) can be both set and verified on the interface.

Both acquisition and review versions of RAFFAELLO can also benefit from a full compliance to the DICOM standard, as well as IHE integration of several actors and profiles. Complete integration in the hospital workflow is therefore guaranteed.



## Customizable

RAFFAELLO is a modular software, and additional tools can be easily purchased to meet increasing customers' needs through the use of the product, as well as to receive new features not originally available.

Customers are given the possibility to create multiple Acquisition Protocols for AWS and to change review preferences through Hanging Protocols. Protocols can be customized for each user and each use of the same device, and workflow rules can perform the proper automated selection during the activities.

Interface colours and some layout features are also personalizable directly by the customer.



## High Image Quality

IMS continuous effort to produce high quality images with low delivered dose brought to the developing of the latest processing algorithm, Deep View , suitable for both FFDM and DBT images, that provides:

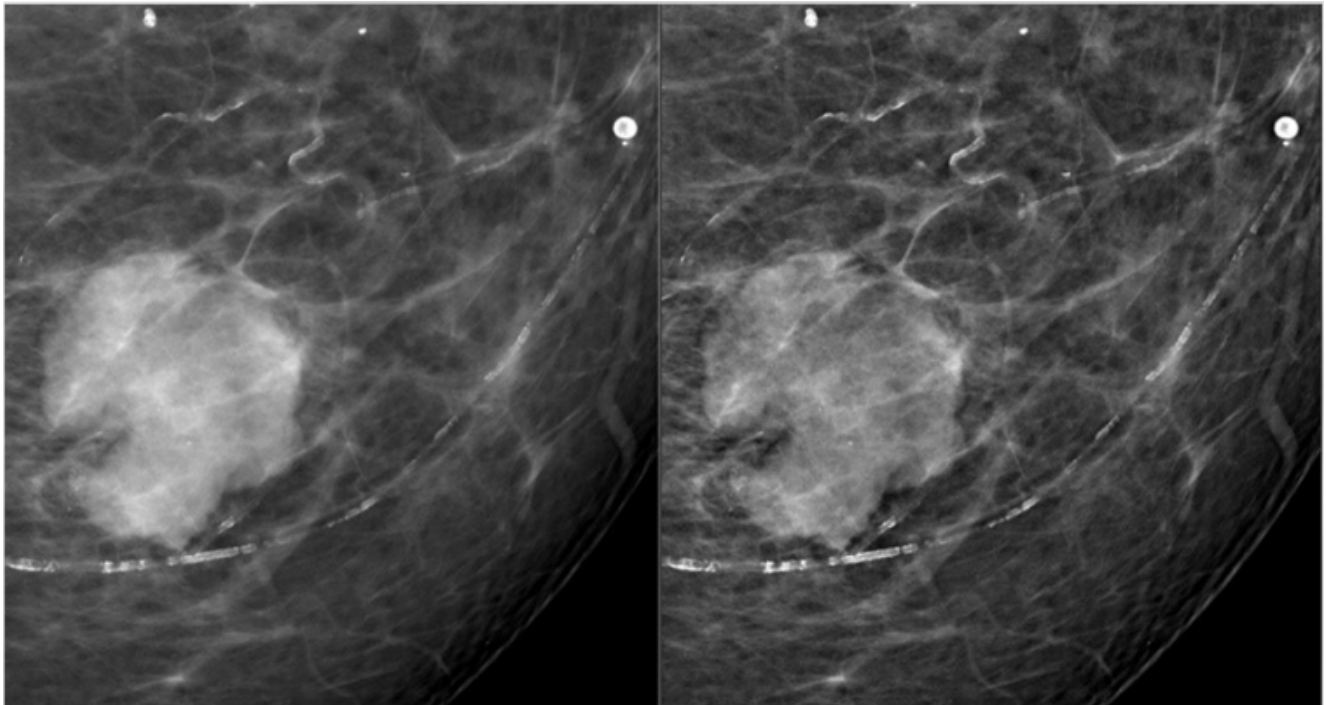
Perfect sharpness of all anatomical features;

Increased visibility in the glandular areas;

Better visualization of microcalcifications, even in very dense breasts;

Improvement of the general contrast of images.

Beside that, various processing algorithms can be tailored according to the radiologist's needs and preferences.



Conventional processing

Deep View



## Tomosynthesis Reconstruction

IMS has always believed that tomosynthesis imaging should not settle for less than the best reconstruction offered by Iterative methods: the in-house algorithms included in CANOVA guarantee an accurate depiction of breast structures, with optimal use of the information from the wide angular range and minimal number of exposures, while keeping at the minimum the typical artifacts. The small reconstruction voxel, combined with the great features of IMS Giotto systems, grant the best resolution in all three directions.

The high flexibility of the algorithm allows personalized configuration for SLAB reconstructions, as well as a 0.5 mm reconstructed slice for tomo-guided biopsy.

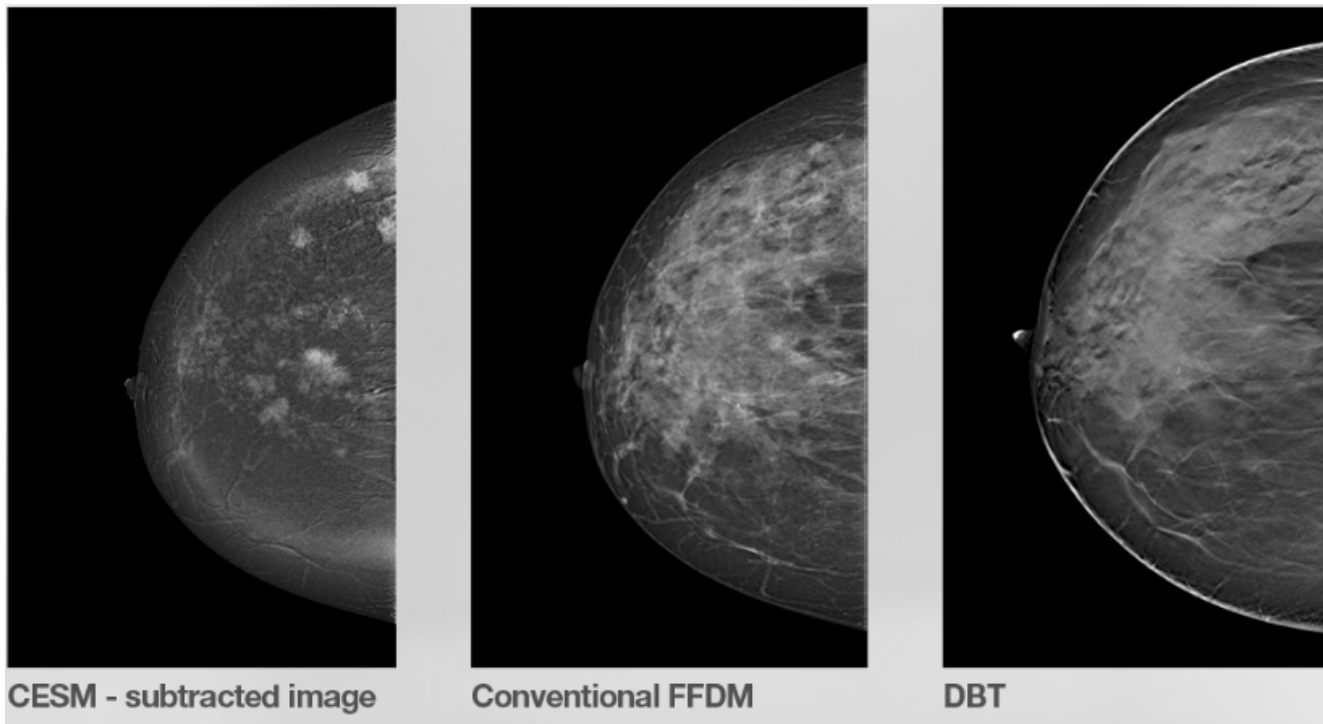
As an optional module of DBT algorithms, CANOVA can also produce 2D synthesized image from the tomosynthesis dataset, which allows radiologists an overall view to evaluate breast density and perform a comparison with prior 2D exams: G-View provides FFDM-like breast images, without any extra dose to patient, making the transition from FFDM to tomosynthesis easier and smoother.



## CESM Subtraction Algorithm

Among the optional modules for advanced imaging technique Contrast Enhanced Spectral Mammography (CESM) is powered by a dedicated combination algorithm for the dual energy acquisition, to enhance the perfusion in the breast of a iodinated contrast agent.

The patented method for system calibration, together with the proprietary algorithm to suppress the artifacts movements between the low and high energy acquisitions, ensure the perfect visibility of concentrations down to 0.5 mg/cm<sup>2</sup>.



CESM - subtracted image

Conventional FFDM

DBT

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