



Computer-Aided Detection for Digital Mammography

syngo® MammoCAD

Answers for life.

SIEMENS



Courtesy of Dr. Lindhardt, Regionshospitalet Viborg, Denmark

Computer-Aided Detection for Digital Mammography *syngo* MammoCAD

The Key to Diagnostic Success in Mammography

Diagnostic success in mammography includes detecting breast cancer in its earliest and most treatable stage.

Computer-Aided Detection (CAD) is becoming an integral part of the mammography workflow, helping radiologists detect cancer as early as possible with unprecedented accuracy.

syngo[®], our unique solution for the diagnostic and therapeutic cycles, knows how you work. Fast, easy, and intuitive, *syngo* brings together all of the solutions critical to you — and your patients. Uniquely role based for your workflow, *syngo* integrates your day, your department and beyond. Leading to a whole new level of clinical excellence.

syngo[®] CAD Manager is a platform that supports multiple algorithms, including *syngo*[®] MammoCAD. *syngo* CAD Manager automatically recognizes the examination type and correctly applies the appropriate algorithm. Once the algorithm has been applied and the images are processed, *syngo* CAD Manager then routes the resultant images to the correct destination for review and interpretation.

syngo MammoCAD analyzes images from the Siemens full-field digital mammography systems and generates CAD marks to highlight suspicious areas, such as masses and microcalcifications.

syngo MammoCAD forms a complete, top-quality solution together with MAMMOMAT *Novation*^{DR}, MAMMOMAT *Inspiration*^{*} and *syngo* MammoReport.

The application was developed using typical structures of clinical cases worldwide and is continually being updated. With CAD, your mammography system will be more efficient.

* This product is not commercially available in the US.

Advanced CAD Technology and Optimal Integration Efficient Workflow. More Confidence. Better Outcomes.

Advanced technology, seamless integration, and intelligent workflow are some of the benefits included with *syngo* MammoCAD.

The Siemens CAD solution leverages advanced image-processing capabilities with state-of-the-art pattern recognition technology. Dedicated algorithms search the mammogram for signs of microcalcifications or masses and mark potential lesions for review by the radiologist. The results are generated automatically parallel to the clinical workflow, working like a second reader.

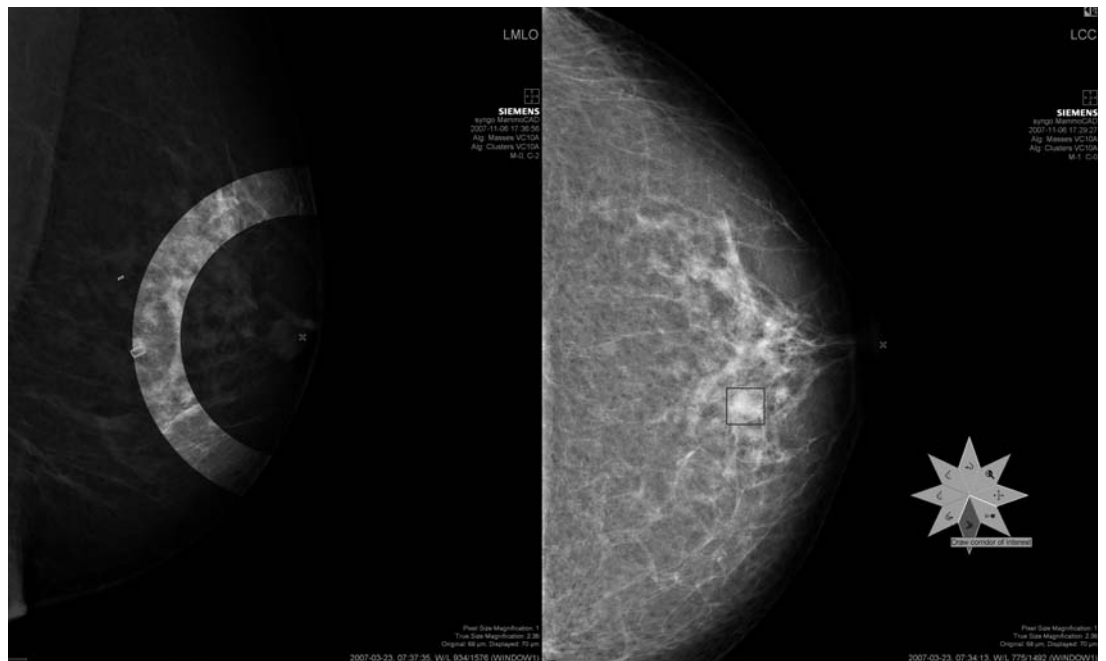
The CAD technology has been developed on an extensive database of Siemens digital mammography images. The result is a CAD system that provides accurate detection of clinically relevant lesions, thereby helping to enhance confidence in the detection of breast cancer.

syngo MammoCAD is optimized for high-performance detection on digital mammography images, and for workflow efficiency in the digital mammography environment.

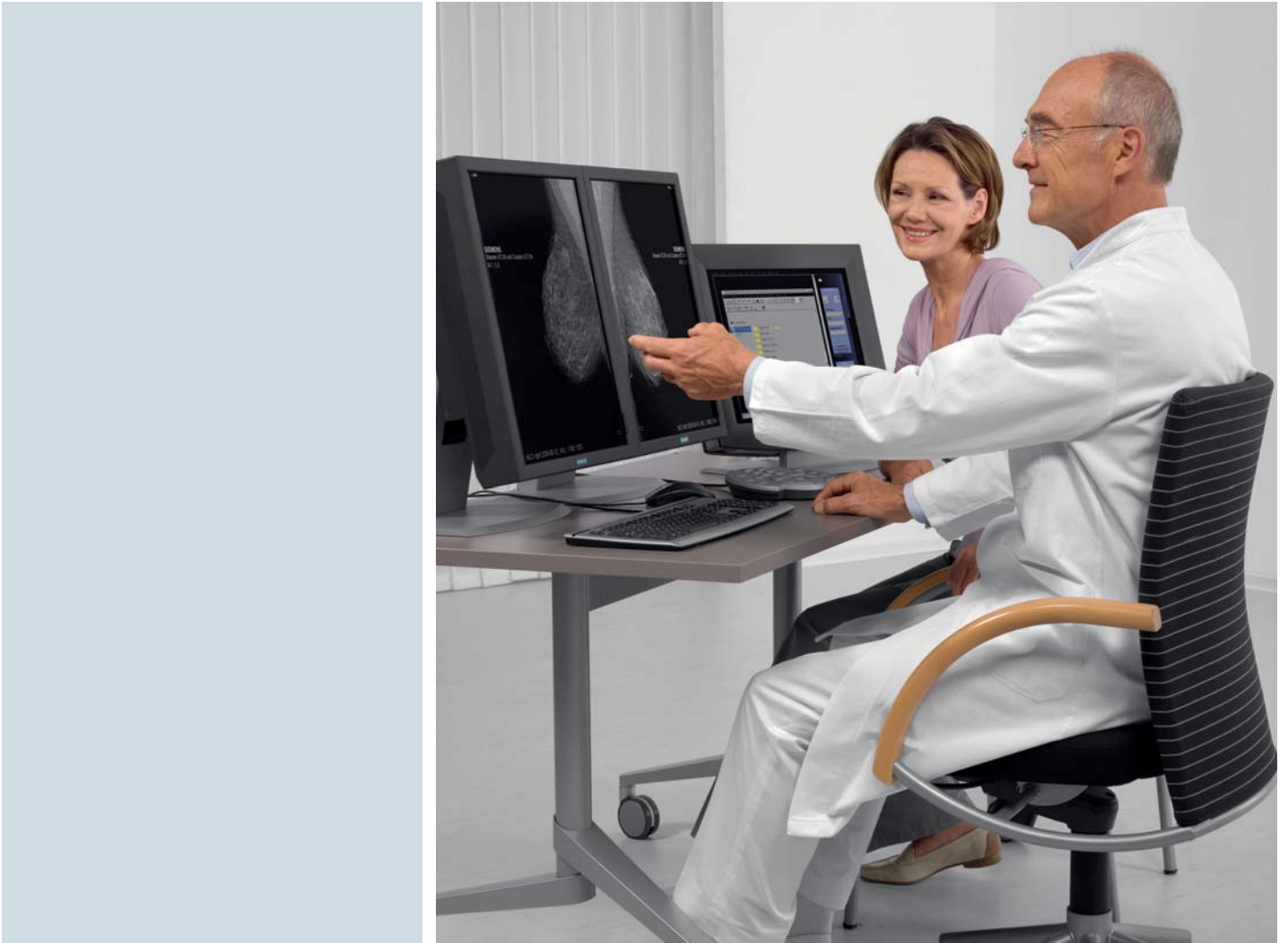
In combination with *syngo* MammoReport, additional optional features include:

- Breast density in MammoBrowser
- Show More, Show Less, which customizes the display of CAD markers
- Additional CAD information provides the number of calcs in a cluster
- Corridor of Interest: Identification of marked lesion in 2nd view using CAD findings

This tool assists the radiologist in locating a finding in the second view, when the location is not clear on initial inspection.



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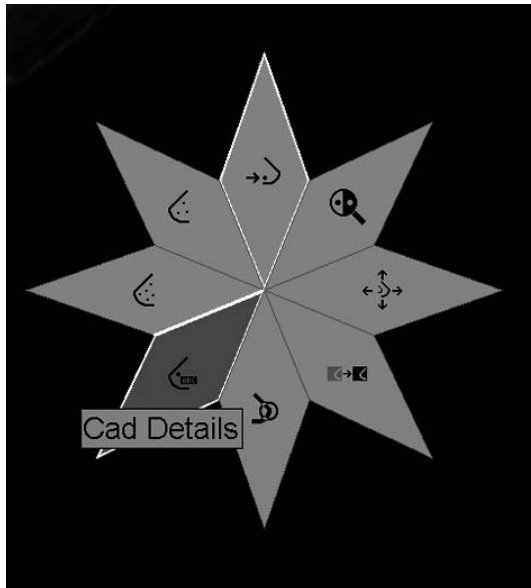
The Siemens CAD system is able to connect with up to four acquisition devices and output results to as many as 10 DICOM devices. *syngo* MammoCAD performs CAD processing of a four-image case within an average of 2.5 minutes.*

Using DICOM Mammography CAD SR (Structured Report) format, the CAD processing results are automatically transferred to the soft-copy reading workstation(s) for review and reporting. In addition, CAD results can also be transferred to the PACS archive for storage. Thus, *syngo* MammoCAD fits seamlessly into the optimized workflow available in digital mammography.

On the *syngo* MammoReport workstation, Siemens CAD results are clearly marked for enhanced visibility. The CAD marks show exactly the region of interest that was detected by the algorithm, without obstructing underlying image information.

* Results may vary based on workload.

The SmartSelect feature is available with syngo MammoReport



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Hardware Specifications

Computer Configuration	
CPU	2x ≥ Intel Dual-Core Xeon 5160 3.00GHz 4MB 1333MHz
Network Adaptor	1x 10/100/1000 Mbps
Disk Drives	1x Floppy Drive, 1.44 MB
Slots	4 x 3.5" on board
Memory	3GB DDR2 SDRAM PC400 ECC (standard)
Hard Disk	2x 73 GB, U320 SCSI, 10K (standard)
Hard Disk Controller	1x Ultra DMA-100 Controller (on board for 2 x 2 drives)
DVD	1x DVD-ROM

Operating Data	
Power Requirements	110 V to 240 V ± 10%, 50/60 Hz ± 1 Hz

Environmental Conditions	
Temperature Range	+10°C to +35°C
Relative Humidity	15% to 75%, non-condensing
Barometric Pressure	700 hPa to 1060 hPa

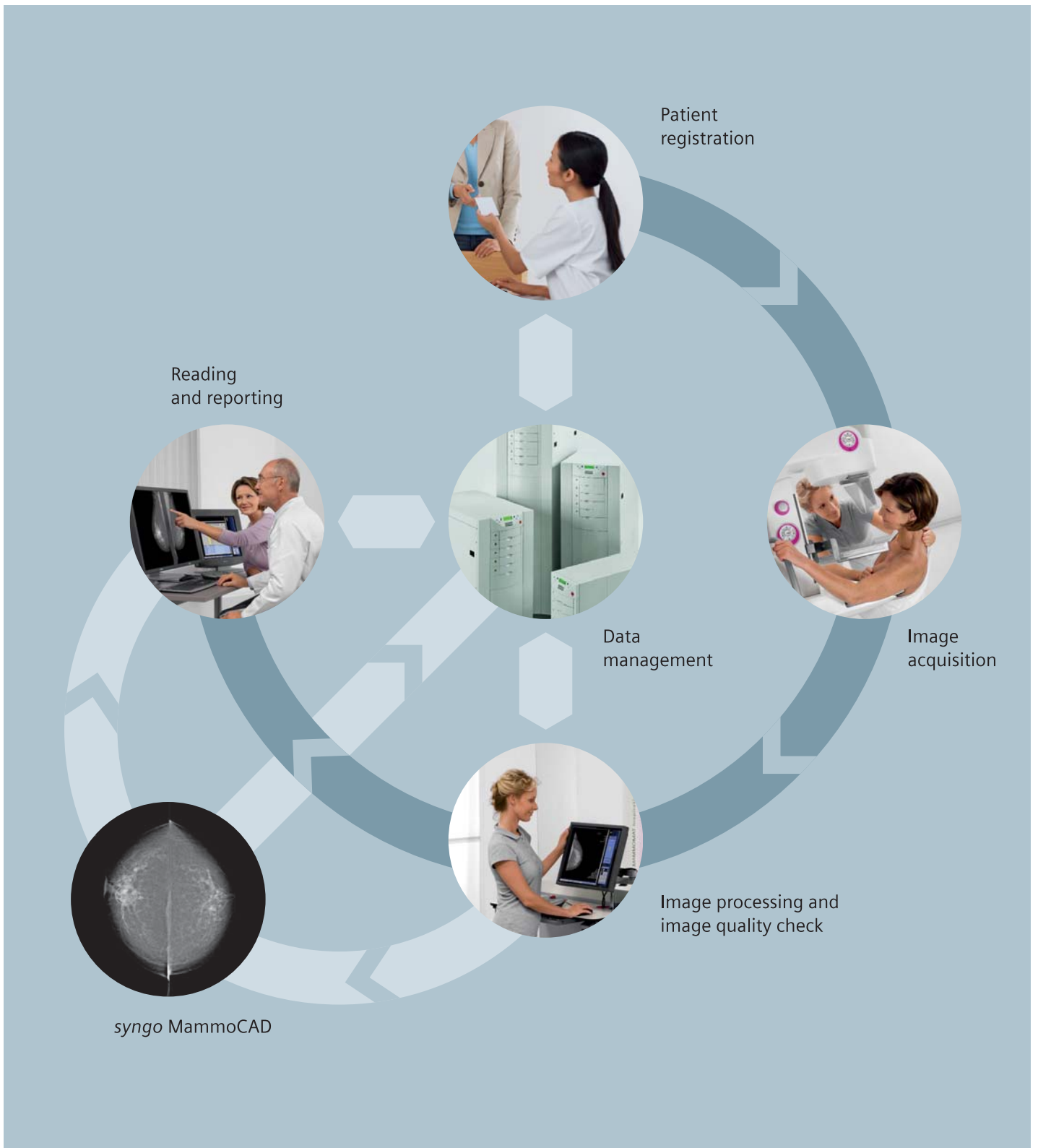
Technical Data

- Validated for use with:
 - MAMMOMAT *Novation*^{DR}
 - MAMMOMAT Inspiration* full-field digital mammography systems
 - *syngo* MammoReport soft-copy reading and reporting workstation
- Input:
 - Data: DICOM MG "For Processing"
 - Connections: Up to 4 DICOM input connections
- Output:
 - Data: DICOM Mammography CAD SR
 - Connections: Up to 10 DICOM output connections
 - CAD results can be stored in a PACS system
- Processing time and throughput:
 - Processing time of 2.5 minutes on average per four-image case**
 - Throughput of up to 40 four-image cases per hour
- Standards:
 - DICOM 3.0
- Administrative functions:
 - Set-up configuration via web interface
 - Processing status pages viewable via web interface

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** Results may vary based on workload

Digital Workflow with CAD



syngo MammoCAD
is not available for sale in the US.

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