

# Digital Mammography Imaging on KODAK CR Systems

NOW  
available  
**DIRECTVIEW CR**  
Mammography feature  
in the USA!



Digital mammography imaging from Carestream Health  
– solutions for great workflow, productivity, and patient care.

Commercial distribution of the KODAK DirectView  
CR Mammography Feature and related accessories  
pending FDA approval of final labeling.

## CAPTURE

### KODAK DirectView CR Mammography Feature

#### High-resolution imaging for screening and diagnostic mammography

Bring the mammography image quality and workflow efficiency of KODAK DirectView CR Elite, Classic, and 975 Systems to your mammography department. This feature, coupled with KODAK DirectView CR Mammography Cassettes and KODAK DirectView EHR-M Screens, delivers mammography-quality images while retaining all CR system features and capabilities for general radiography examinations.

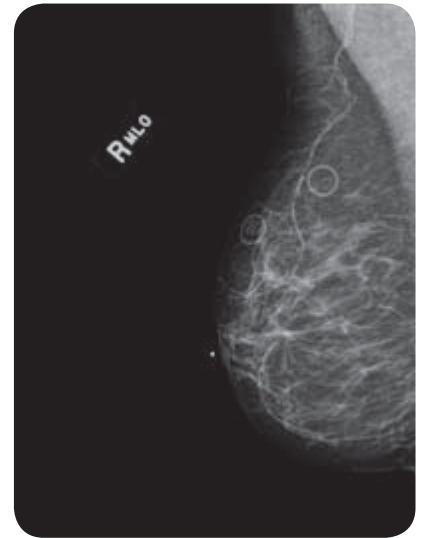
The Mammography Feature is available as an option for purchase with a new CR Elite, Classic, or 975, or as an upgrade to an existing DirectView CR system. From stand-alone to multi-room distribution the mammography feature helps you improve your department's productivity with single- and multi-cassette CR systems.

#### Image Processing

The image processing parameters for the DirectView CR Mammography Feature were developed to maximize visualization of different breast tissue types and

pathology such as microcalcifications, masses and architectural distortion. These parameters, based on clinical studies, have been validated by radiologists with experience interpreting digital mammography.

- Produces high-resolution scans with a 48.5-micron pixel pitch
- The exposure latitude of CR and post-acquisition image processing can achieve more consistent image quality than conventional imaging
- Screen integrity is maintained and screen life is maximized by a transport system that never touches screens during scanning and erasing
- Provides optimal quality for mammography with KODAK DirectView EVP Plus Software and KODAK Black Surround/ Masking Software
- Compatibility across multiple "up-" and "downstream" networked devices
- DICOM storage and print as a SCU. Also supports DICOM MWL
- Supports DICOM MG-IOD
- Supports IHE, SWF, PIR, and CPI
- Allows for seamless integration with PACS, CAD, RIS, and other MG-IOD digital imaging chain components



Upgrade most DirectView CR systems for mammography imaging.



# SOFTWARE

## KODAK DirectView Version 5 Software

KODAK DirectView Version 5 software delivers an array of capabilities that enhance productivity, performance, and return on investment for healthcare providers of all sizes and complexities. It is available with new DirectView System installations and as an upgrade to most existing systems.

### Flexible and Easy to Use

KODAK DirectView Version 5 Software offers a host of flexible “designed for the way you work” features and solutions. A simplified user interface reduces the time required to complete a procedure. Image processing parameters can be changed according to exam type and user preference. Support for high-resolution monitors makes on-screen image review easy. Enhanced interconnectivity capabilities help improve compatibility across multiple “upstream” and “downstream” networked devices. The addition of Enhanced Frequency Processing delivers improved appearance of the skin line and skin fold as well as reduced appearance of noise.

### Preference Setup Tool

With version 5.1 software and higher, the preference tool gives you the option of choosing between nine preconfigured looks for each breast type. This tool simplifies customization of image processing preferences allowing qualified users to change preference editors and default appearance for different applications or different end users. Easier, more intuitive adjustments independently control image parameters such as contrast, brightness, sharpness, noise level and latitude.

## KODAK DirectView EVP Plus Software

The KODAK DirectView EVP Plus Software option takes mammography image and diagnostic quality to new levels. Several time-saving features reduce capture set-up times and boost overall quality of image output—resulting in greater operational efficiency and consistently high-quality images that help improve patient diagnosis. Easy setup results in greater throughput.



*Note: Carestream Health recommends using these default settings initially. If you choose to modify the parameters, we recommend optimizing the parameters based on a wide variety of abnormal cancer cases.*

## Surround/Masking Software

Provide better, easier viewing of CR images by masking the white collimated area to eliminate foreground flare. Automatically identify the area of interest and hide surrounding space. Manually select complex anatomy to provide proper collimation verification.

## Low-Exposure Optimization Software

Reduce the appearance of quantum noise in areas of low exposure while preserving diagnostic detail.

## Grid Detection and Suppression Software

Automatically detect and suppress gridline artifacts to improve image quality.

# CR MAMMOGRAPHY SYSTEMS

## MULTI-PLATE PROCESSING

### KODAK DirectView CR 975 System

#### Our workflow leader

The KODAK DirectView CR 975 System manages 16 CR cassettes simultaneously providing centralized multi-cassette CR processing with “drop-and-go” decentralized workflow. Versus slower competitive models, this CR system reduces technologist queuing time and allows images to be forwarded directly to multiple networks—even to the examination room—freeing up more time for patients.

#### Key features:

- Faster throughput
- Easy cassette loading
- Expansive software capabilities
- Reduced service access requirements for greater placement flexibility



KODAK DirectView  
CR 975 System

## SINGLE-PLATE PROCESSING

### KODAK DirectView Elite CR System

#### Compact footprint, single-cassette CR readers for x-ray room placement

This compact, single-cassette CR system is ideal for use in an x-ray room. It integrates a central database with multiple workstations, to improve workflow, productivity, and patient throughput.

#### Key features:

- Throughput of 78 plates/hr for 18 x 24 cm and 58 plates/hr for 24 x 30 cm
- Support for interfaces that expedite the exchange of image information with other vendors' digital mammography and RIS/PACS systems
- Two-up image printing aligned with the narrow chest wall
- Full-featured GUI (Graphic User Interface), image processing, and software options/tools
- High image quality with KODAK DirectView EVP Plus Image Processing

### KODAK DirectView Classic CR System

#### Affordable entry to digital

The KODAK DirectView Classic CR System delivers the features of the ELITE CR with throughput of 60 plates/hr for the 18 x 24 cm, and 45 plates/hr for the 24 x 30 cm. This system is ideal for customers with lower patient volumes.



KODAK DirectView  
Elite CR System



## CASSETTES AND SCREENS

### KODAK DirectView CR Mammography Cassettes

- Available in two mammography sizes: 18 x 24 cm and 24 x 30 cm
- Rugged, durable cassettes are designed for long life to reduce operational costs
- Standard-sized film mammography cassettes meet ANSI standards and are compatible with most analog mammography systems
- Special pink labeling of mammography cassette assists in easy identification

### KODAK DirectView CR EHR-M Screen

- Screens are designed for use with the KODAK CR platform, which provides proven reliability and ease of service to reduce costs and downtime
- Compatibility with other KODAK CR equipment for mammography means there is no need to retrofit or upgrade cassettes

## CR-TO-PRINT

### CARESTREAM DryView 5850 Laser Imager

This tabletop laser imager delivers on-demand mammography printing at 580 ppi resolution from multiple modalities, including CR and FFDM. The DryView 5850 accommodates five film sizes - including 8 x 10 (20 x 25 cm) and 10 x 12 (25 x 30 cm) - and provides the superb image quality needed for mammography imaging.

This laser imager is ideal for imaging centers, departments and small clinics with limited space availability or unit placement constraints.

#### Key Features:

- Ideal for CR to print applications in facilities performing both general radiography and mammography imaging
- Compatible with KODAK DryView DVM or DVM+ Mammography Laser Imaging Film
- Proven true-laser technology



## The World's Best-Selling Family of Laser Imagers

CARESTREAM DryView  
5850 Laser Imager



## WORKFLOW TOOLS

Choose from optional accessories and software, and expand the capabilities of your KODAK DirectView CR System to meet your facility's needs.

### KODAK DirectView Remote Operations Panel

Extend the reach and functionality of your KODAK DirectView CR System with this wall-mounted touch-screen panel that allows you to perform most system functions away from the main unit. Network up to 10 remote operations panels to a single DirectView CR System. Or network one remote operations panel to as many as eight DirectView CR Systems. Functions include patient/ cassette/exam ID, image review, image routing/rerouting, request for image, reprocessing, and editing of patient demographics and position markers.

### KODAK DirectView Mammography X-Ray Interface\*

The Mammography X-Ray Interface saves time and reduces errors by allowing the transfer of exposure settings data. Proprietary to KODAK CR Systems, this option automatically populates descriptive information from analog x-ray modalities directly into the CR console image record.

Automatically populate descriptive information from analog x-ray modalities directly into the CR console image record:

- Exposure kVp
- Exposure mAs
- Filter
- Anode material
- Exposure angle
- Laterality
- Source to image distance
- Source to patient distance
- Compression thickness
- Compression force
- Magnification ratio

\* Availability varies by country

### KODAK DirectView CR Mammography Total Quality Tool

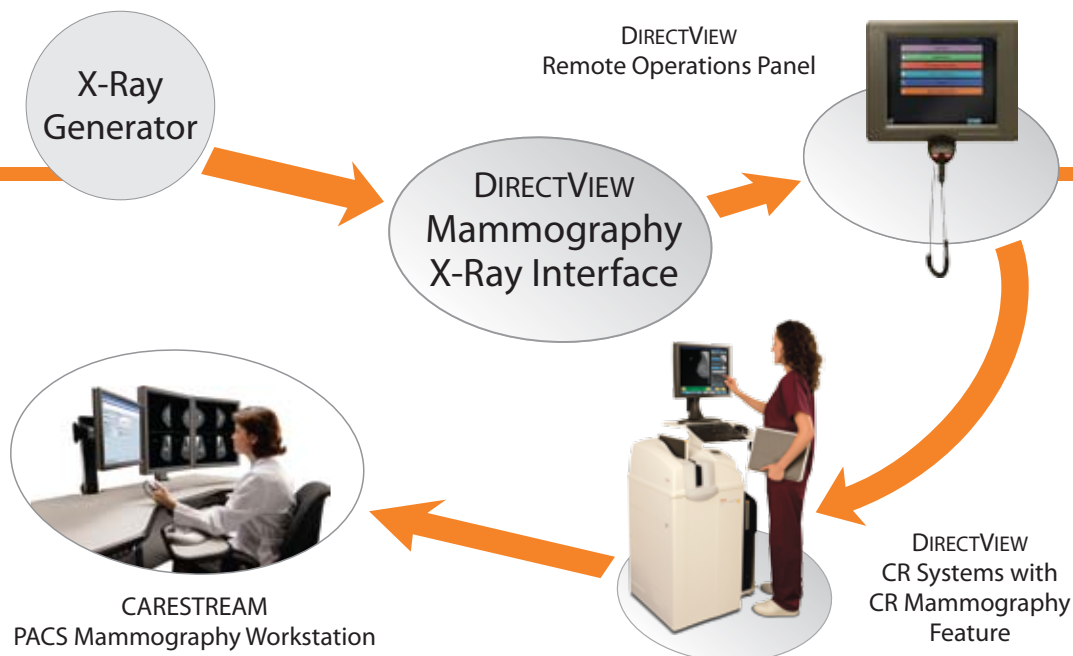
**Realtime objective image testing—with no workflow interruption!**

This fully integrated analysis and reporting software makes testing easy and keeps your CR in service during testing. This TQT software is a helpful tool for troubleshooting and will alert you to potential problems in your system outside of tolerance.

The optional complete TQT software package includes:

- A test phantom kit designed for testing 18 x 24 cm and 24 x 30 cm cassettes
- A user guide that explains the simple testing exposures and procedures
- Analysis and reporting software that tracks measurements which may predict the most common failure modes
- Image test data (for current, as well as previous testing sessions) can easily be exported to a MICROSOFT EXCEL file for review and analysis or for use in reports and other documents

## KODAK DirectView Mammography X-Ray Interface



Note: Available for selected x-ray generators. DirectView Remote Operations Panel is recommended for use with the Mammography X-Ray Interface, unless the CR reader is located in the mammography room.

## KODAK DirectView Capture Link Software

Link up to five KODAK DirectView CR and/or DR Systems and 20 Remote Operations Panels to improve workflow and productivity in high-volume areas. Share cassette identification, scanning, and image review functions on linked systems. Or you can get the same functionality between two CR readers and their Remote Operating Panels without the need for an external server by installing Simple Capture Link.

## KODAK Mammography Digitizing System

Convert standard, film-based images to digital for easy soft copy comparison of priors with current digital mammograms.

Mammography films can be digitized then sent to DICOM format to any PAC system and viewed as priors on a workstation. Digitized images can be manipulated in a mammography PACS, just like an original digital study.

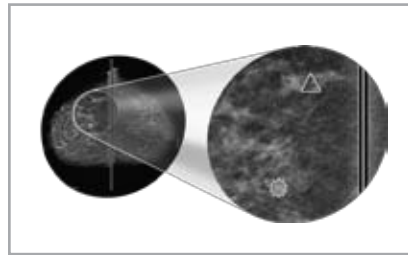
### Key Features:

- Track and display records in DICOM format
- Five different workflow configurations for specific needs
- User-friendly system design is easy to learn and operate
- Accommodate up to 12 films of mixed sizes
- Automatically retrieve patient information from existing RIS systems

## CARESTREAM Digital Mammography CAD System

(Works in progress)

Developed specifically for the KODAK DirectView CR Mammography Feature, this system improves cancer detection in screening and diagnostic mammograms. A series of algorithms use sophisticated image processing and pattern recognition technology to identify and rank suspicious areas in a mammogram. 39.4% of missed cancers could have been detected 14.8 months sooner with the use of CARESTREAM CAD.



## CARESTREAM Radiology Information System (RIS)

The full-featured mammography solution in KODAK CARESTREAM RIS enables accurate documentation and reporting of all clinical findings. This graphically enabled set of clinical tools captures patient medical and mammography radiology histories, mammography findings, follow-up and patient tracking, pathology results, and an automated radiologist report.

## CARESTREAM PACS for Mammography Solutions

**Comprehensive mammography workflow**

CARESTREAM PACS for mammography offers advanced mammography specific viewing tools to support your radiologists' screening and diagnostic workflow needs. Our standards-based open architecture is scalable, configurable and IHE compliant. This allows you to view, manage and store mammography images from multiple sources including FFDM, CAD, CR mammography, breast MR, breast ultrasound, digitized films and general radiography modalities.



## SERVICE

Count on dependable, prompt service and support from Carestream Health for your Kodak DirectView CR System. Carestream Health offers a variety of professional services ranging from site planning and project management to DICOM and integration services. Carestream Health's design and manufacturing processes ensure maximum system performance and reliability.

### You can rely on Carestream Health

Carestream Health's digital mammography solutions provide the tools needed to ensure great workflow, productivity, and patient care. Our full range of digital mammography solutions include CR, CAD, RIS, PACS, print, archiving, and professional services. Trust Carestream Health's 80 years of clinical mammography experience to help you deliver exceptional patient care.

<http://mammo.carestreamhealth.com>

### More Information

To learn more about the KODAK DirectView CR System and other digital solutions for mammography, contact your local Carestream Health representative or authorized dealer.



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Carestream Health, Inc.  
150 Verona Street  
Rochester, NY 14608  
U.S.A.

# Carestream