

# SECTRA PACS

Productivity without limits



RIS/PACS | MAMMOGRAPHY | ORTHOPAEDICS

# SECTRA

# THE ONLY OPINIONS THAT MATTER

As Sectra has over 1,000 installations, we are sure to have a productive customer site in your area. If you would like to talk with one of them, to hear and see how they experience Sectra's installations, products and services, please contact us at [info@sectra.com](mailto:info@sectra.com)



## **Hartford Hospital, Connecticut, USA**

*"By making images available instantly whenever they are needed and by working smoothly with our integrated speech recognition reporting system, we were able to reduce report turnaround time from an average of 24 hours to one hour or less."*

Bob Rice, Radiology Department Administrator



## **Klinikum Lüdenscheid, Lüdenscheid, Germany**

*"Achieving increased efficiency was our main goal when implementing PACS. With Sectra PACS, we have optimized our workflow and can provide better service to our referring units."*

Professor Dr. Heiko Alfke, MD, Director of Radiology



## **Telemedicine Clinic (TMC), Barcelona, Spain**

*"The Sectra engineers have really figured out how to take advantage of the way radiologists work, and how to best utilize available networks. Caching images locally through Sectra PACS turned out to be over 30% more efficient than our previous system."*

Dr. Hans Billing, MD, MRI expert at TMC



## **Region Skåne, Sweden**

*"The radiology operations in our region, ten hospitals performing 900,000 exams per year, has, with this new common digital solution for managing radiology images, taken an important step towards more efficient cooperation and use of resources."*

Hans Stridbeck, Regional Chief Medical Officer



## **Memorial Hospital, Gulfport, USA**

*"Many of our new physicians are trained elsewhere with other vendors' PACS. They never complain about our Sectra solution, but instead share glowing comments about how well it works."*

Michael Diaz, MD, Medical Director



## **Galeazzi Hospital, University of Milan, Milan, Italy**

*"For a hospital such as ours, productivity is everything. We needed a PACS that could cope with the pace, and support our vision of an efficient hospital-wide workflow."*

Dr. Franco Perona, Chairman of the Radiology Department



## **Radiologisches Zentrum, Altötting Mühldorf, Germany**

*"Sectra PACS offers comprehensive diagnostic functionalities independent of our user's location. Advanced technology ensures efficient distribution of data sets of any size."*

Dr. Thomas Merl, Radiologist



## **PRODUCTIVITY WITHOUT LIMITS**

Co-operation across hospital and regional boundaries results in great advantages and efficiency gains.

Sectra PACS is the performance solution for wide area radiology, enabling efficient workload sharing across multiple sites, even for very large image stacks over strained networks.

Sectra PACS is built on Sectra RapidConnect™ technology. It enables the rapid image and data delivery required for a competitive radiology workflow allowing you to efficiently share radiology services across geographic and subspecialty boundaries.

**Welcome to productivity without limits.**

# MAKE THE WORLD SMALLER AND YOUR DEPARTMENT BIGGER

## **Wide area productivity**

With Sectra PACS you efficiently utilize your department resources as radiologists can perform their work from anywhere, even from home. You can easily share radiology services with other hospitals or clinics even if they are located on the other side of the world, resulting in great productivity gains.

Sectra PACS is designed for 24/7 operations and ensures uptimes of 99.99% and more. Sectra PACS will always be available and no data is lost—ever.

## **Productivity for radiologists**

Sectra PACS ensures quick and easy access to patient data and images from any work location regardless of the size of the dataset. Radiologists can display and navigate a stack of 60,000 slices just as quickly as one with 60—a result of our revolutionary technology, Sectra RapidConnect.

Sectra PACS is designed in tight cooperation with our customers. Radiologists have the right working environment and instant access to all the tools they need in one single diagnostic workstation. Sectra PACS is enjoyable to work with and the intuitive user-interface guarantees a minimum of extra training to get started. User-configurable shortcuts and hot keys limit the number of clicks to give improved ergonomics and overall enjoyable and higher productivity.

## **Productivity for medical specialists**

To meet the growing demand for complete solutions that integrate medical specialities into a single platform, Sectra also offers advanced applications for clinical disciplines such as orthopaedics, mammography, cardiology and nuclear medicine.

Moreover, through Sectra Clinical Solutions Network™, CSN, Sectra allows third-party vendors to tightly integrate their products with Sectra PACS, giving medical specialists and radiologists the freedom to choose the best of breed applications relevant to their particular medical field. Sectra CSN is the first and most complete integration program within PACS.

## **Productivity for referring units**

Sectra PACS improves your service to referring units and makes them more productive. Clinicians have fast access to the radiologists' visualizations as well as their written answers. Clinicians have the same user-friendly interface as your radiology department. Radiologists can utilize the optional integrated volume visualization tool to quickly and easily explain findings to referring clinicians, which in turn facilitates for the clinicians when explaining to their patients.

Sectra PACS will give you the competitive edge needed to excel in an increasingly competitive environment and boost your productivity.

“Our physicians have become very reliant on images and require access everywhere: from the office, in nursing units, in the OR and at home. Sectra PACS incorporates secure web access to images to meet physicians’ needs.”

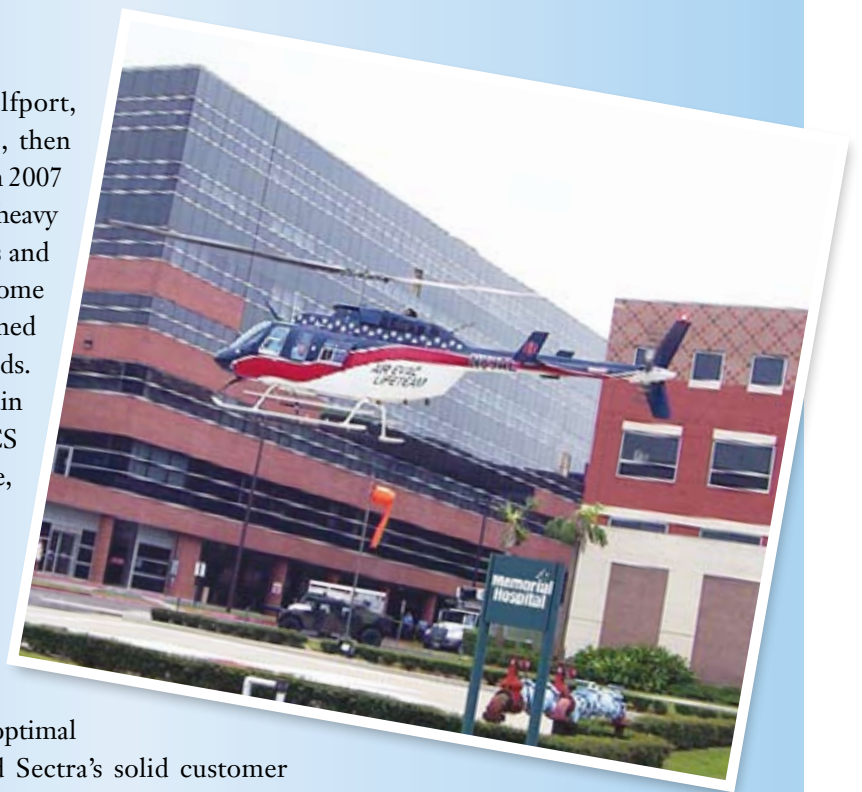
Mike West, Director of Diagnostic Imaging Services, Memorial Hospital, Gulfport, Missouri, USA

## Setting the stage for second-generation PACS success

For several years Memorial Hospital in Gulfport, Missouri, USA, had been using Sectra PACS, then deployed by Sectra’s former partner, when they in 2007 realized they had reached a crossroads. New data heavy modalities overloaded the archive and networks and radiologists called for enhanced access from home and their offices. Users also requested streamlined access to images via Electronic Medical Records. Memorial Hospital faced a key decision: remain with Sectra’s former partner, evaluate new PACS vendors or transition to Sectra PACS for service, hardware, software and archive.

“Multiple factors contributed to the decision to deploy Sectra PACS,” says Mike West, Director of Diagnostic Imaging Services, “Our working relationship with Sectra, fast and easy access to images from everywhere despite less than optimal bandwidth, the system’s user-friendliness and Sectra’s solid customer support program.”

In the light of ongoing challenges, the Memorial Hospital’s imaging team remains confident about the robust IT infrastructure, paired with the scalable, open Sectra PACS. This proves a solid foundation for the future of this 21st century community hospital.



# TAKING YOUR OPERATIONS TO THE NEXT LEVEL

## You're in control

Sectra provides everything from management support tools to workflow optimization, system integration and remote monitoring to help you make the right operational decisions.

With the department manager workstation you make your department more efficient—graphs and reports provide up-to-date information on utilization of resources. With this workstation you become more cost-conscious as it helps you make informed investment decisions and enables optimized growth planning.

## Streamlining workflow

Sectra PACS workstations are designed to streamline your radiology workflow. All workstations meet the special requirements of the end users enabling them to perform their work as effectively, safely, and quickly as possible. And with a proven training concept, end users will be fully productive from day one.

## Truly modular and scalable

Sectra PACS adapts to the needs of every radiology clinic. It is a truly modular and scalable system that ranges from basic intranet interfaces to advanced diagnostic workstations, from stand-alone workstations to high availability mass-storage enterprise servers. An unlimited number of workstations can be connected to the network, and authorized users can access any image at any time.

With Sectra PACS there is no need to change your radiology strategy or IT systems because of a changing environment—Sectra PACS changes with it.

## Sectra PACS workstations

Streamlines your radiology workflow.



**Department manager**  
Management support tool for monitoring of PACS production and identifying bottlenecks before they become a problem.



**Radiologist**  
High-performance diagnostic workstation.

“We started our digital journey together with Sectra already in 1998 and now Sectra PACS is run throughout Karolinska university hospital, performing about 340,000 radiology examinations a year. We have the need for a PACS that evolves to meet our growing demand for the efficient transfer of radiology examinations over multiple sites, and Sectra assures that we always have access to the most recent technology available on the market.”

Olof Flodmark, M.D. Ph.D. FRCP Professor, Neuroradiologist-in-Chief, Department of Neuroradiology, Karolinska University Hospital, Sweden

### Full integration

Sectra's philosophy is full integration with other systems regardless of vendor and Sectra PACS is integrated with various IT support systems such as RIS, HIS and EPR systems and dictation systems.

Sectra PACS is based on an open architecture that supports standards within IHE, HL7, DICOM and HIPAA to facilitate integration.

Sectra is an active member of the DICOM and IHE organizations. Such memberships provide full insight in the standards' future directions and an ability to influence the development of the standards. This is important for the long-term efforts to provide high-quality products.

### Flexible archive solutions

Sectra PACS has a unique modular design that makes it possible to add server capacity as the need emerges. This is achieved through a scalable system design and is done without interrupting production. Sectra PACS connects to all major vendors' storage solutions; consequently, Sectra can utilize your existing Storage Area Network and therefore be highly cost effective using an already optimized IT environment.

### Minimal administration

With Sectra PACS manual administration, services and maintenance costs are kept to a minimum with the Microsoft® standard for deployment of web applications, ClickOnce. Correct versions are checked upon startup and updates are installed automatically if needed.

Sectra PACS with RapidConnect is the complete IT portfolio for digital radiology departments regardless of size.



**Mammography radiologist**  
High-performance diagnostic workstation for mammography radiologists.



**Referring clinician**  
Review workstation optimized for referring clinicians.



**Technologist**  
Quality assurance workstation for technologists.

# MEET SOME EXTRAORDINARY PEOPLE



## **Quality starts with understanding**

Every Sectra employee, from top management to administration, regularly visits customers worldwide to acquire an in-depth understanding of the customers' situation and needs. Do not be surprised if you meet a Sectra developer or marketer at your department one morning!

You will benefit from our know-how in strategic planning, process transformation, workflow optimization and systems integration, which will enhance your productivity and efficiency. Together, through experienced cooperative teamwork, we provide a better working environment for you, which will ultimately lead to enhanced, more effective patient care.

## **Relax, we're there for you**

We believe in bringing the right resource to the problem, whether it is a specialist on remote concepts, an IT partner for hardware support or sending the engineer you need to you. Sectra's service offering is designed to provide safe, reliable and efficient operation of your PACS system. We have more than 20 years of experience in servicing complete radiology solutions, big and small and we have great people—you'll notice. Our service and support engineers are highly skilled in all aspects of IT and are able to assist you remotely 24/7.

Our efficient and cost-effective monitoring tools allow us to keep a watchful eye on the performance of key components, enabling us to intervene before there is a glitch.



# 20 YEARS OF DEDICATION

## **More than 1,000 customers**

Our project methodology has been developed during more than 1,000 customer projects and some of the largest PACS installations in the world, including New York City hospitals, London's NHS hospitals, and the entire public healthcare system in Northern Ireland.

## **Your success is our success**

As a dedicated IT company, and through our 20 years in the RIS/PACS business, Sectra has built know-how and experience matched by few. We are 100% focused on understanding our customers' unique operational needs. This is how we make sure our customers gain the most from their investment. And in fact, many of our customers have been with us for more than a decade.

## **Ideas that make a difference**

Partnering with Sectra guarantees that you will always benefit from the latest technology available and utilize the full potential of diagnostic methods. We build our future-proof solutions in close cooperation with our customers as well as universities and research centers. This ensures we deliver future-proof solutions that will make a difference in your daily work.

Sectra has always been profitable, through both good times and bad.



London's 21 National Health Trusts depend on Sectra PACS when performing 4,000,000 exams annually.

“With volume-based representation, dynamic data reduction and continued close cooperation with our customers and research centers, we come several steps closer to the perfect IT support for image diagnostics.”

Claes Lundström, PhD, Director of Product Management and Research, Sectra



## Innovations for efficient image diagnostics

By Claes Lundström, PhD  
Director of Product Management and Research, Sectra

Buying a PACS is a big investment and it is important to ensure that it is both sustainable and future-proof. At Sectra we are focused on understanding your specific operation and support you with our knowledge. Let me share with you how Sectra stays ready for the future with our vision of how our customers' images will flow in a future system enabling new levels of efficiency in image diagnostics.

The steadily increasing size of image stacks is generally agreed to be one of the most important issues of the future for radiology. The advantages of advanced examinations are great, so it is clear that the significant increase in image production will continue. This obviously entails efficiency problems in the flow of radiological work, from both a technical and human perspective. With ever-growing datasets we have seen the risk of our users eventually drowning in a sea of data.

### Abandoning “slices in a stack”

Sectra is working on creating a long-term sustainable reading environment by moving away from browsing “slices in a stack”. The future-proof architecture, retaining the native structure of the data across three or four dimensions rather than the two-dimensional traditional method, will render completely new ways of obtaining efficient reading—we will soon see volume-based representation.

### Reducing image data transferred

To improve the transfer speed of image data we have Dynamic data reduction, a patent-pending technology. Dynamic data reduction is, as the name implies, based on reducing the amount of image data transferred by omitting transparent areas. X-ray images contain large areas where there is no diagnostically relevant information, such as air surrounding a breast in a mammogram. With dynamic data reduction, we only send significant data, leaving the air in the mammogram example on the server, not allowing it to choke up the network.

We are also working on data formats, allowing for varying image quality within the same dataset. Picture a CT angiography of the abdomen. Apart from the relevant vessels in the image there will be air, bone and soft tissue, only relevant as references. If just the vessels are transferred in full resolution the dependence on bandwidth and latency will decrease, allowing the image to be more quickly transferred, even over poor Internet connections.

In conclusion, with volume-based representation, dynamic data reduction and continued close cooperation with our customers and research centers, we come several steps closer to the perfect IT support for image diagnostics.



# A UNIQUE PACS TECHNOLOGY

Sectra PACS is built on our RapidConnect technology enabling multi-site workflow and rapid image and data delivery. Radiologists can efficiently leverage and share resources across geographic and subspecialty boundaries. Let us explain in two simple steps:

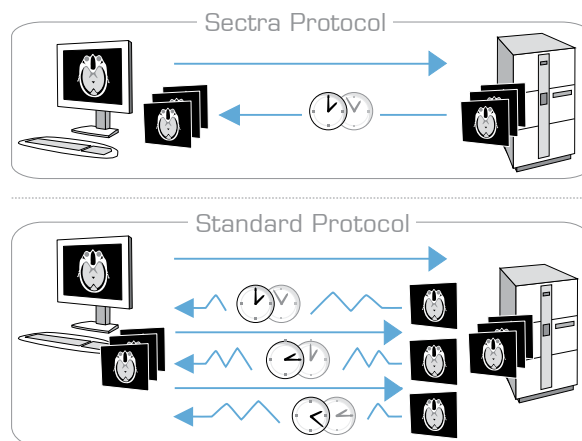
## 1 Handling network limitations

Regardless of your network connection, you should expect images and patient data to be available within seconds if your enterprise is to really exploit the advantages of a distributed workflow—whether for individual radiologists reading images remotely or for entire units working together. How can this be done with less than optimal networks connecting the sites? You will need to handle not only bandwidth but even more importantly, the issue of processing delays of the data transmission—latency.

### ► Sectra server-client protocols

To optimize data transfer in a high-latency environment as much data as possible should be transferred in each instance, as each data-package will take time to reach the destination. Sectra PACS applies efficient server-client protocols in which no more data is sent than what is actually needed, and not more frequently than necessary.

Furthermore, to transfer data as efficiently as possible, Sectra RapidConnect includes compression and streaming technologies, local cache capabilities and progressive transfer.



“*Stated simply, working remotely or achieving a truly effective cross enterprise workflow is difficult without the proper technology to support it. All the components work together to create Sectra RapidConnect technology providing advanced technical solutions that minimizes your radiologists’ waiting times and facilitates multi-site workflows—even with large datasets and when working over the Internet.*”

Claes Lundström, PhD, Director of Product Management and Research, Sectra

## 2 Efficient distributed workflows

For workflow overviews to be useful for planning and prioritization, information compiled from various servers (which would be the case in a cross enterprise scenario) must be presented homogeneously. Also, you would probably not want two radiologists working separately on the same case, which is another issue the system must handle. But most importantly, the system cannot allow for any risk of inconsistent information about a patient or an examination. You must be able to trust that there is always only one original regardless of how the system is configured. Sectra RapidConnect technology enables a safe and truly efficient cross enterprise workflow. Let us take a closer look at how this is done:



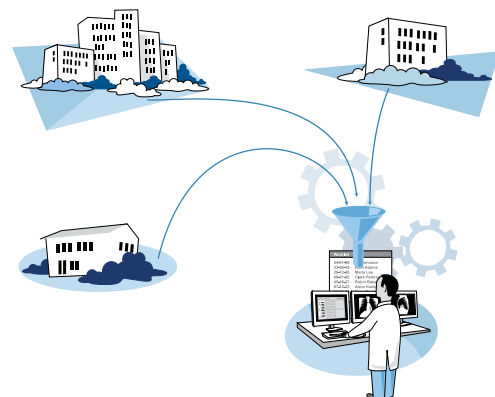
### ► Dynamic worklists

Patient records in Sectra PACS are organized into manageable sets using static and dynamic worklists. Dynamic worklists define the examinations to be included in each worklist by search criteria (such as reading status or modality). They are continuously updated adding new examinations to the list and removing examinations no longer relevant. In this way, dynamic worklists give an immediate overview of current workload and constitute a powerful tool for organizing the work within the enterprise.

### ► Cross-platform workflow

Even though a patient might have been examined at several different clinics, all diagnostic data for the patient is accessed from a single point. Patient information is retrieved from several sites, distributed across large geographical distances, in a manner that is seamless to you.

To improve the IT infrastructure even further Satellite Servers ensure that images are routed the optimal path. Images that should be stored locally are not routed over the central server, but directly transferred to the workstation.

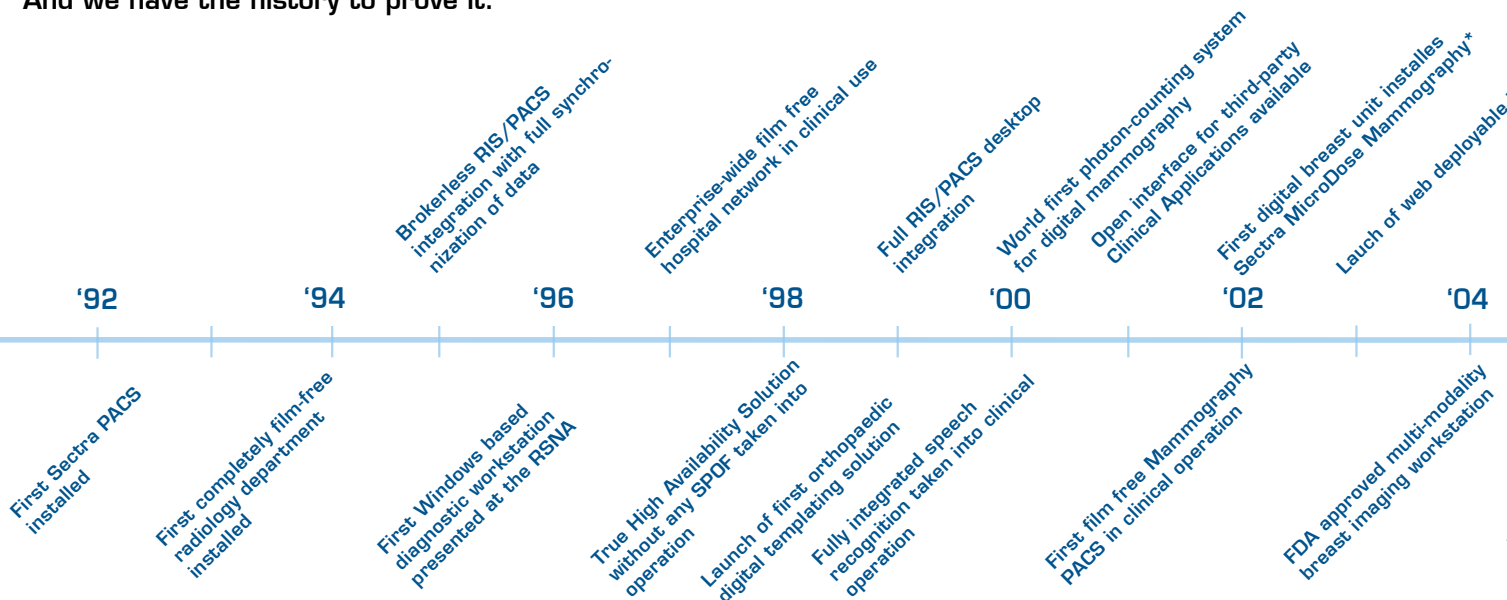


# ABOUT SECTRA

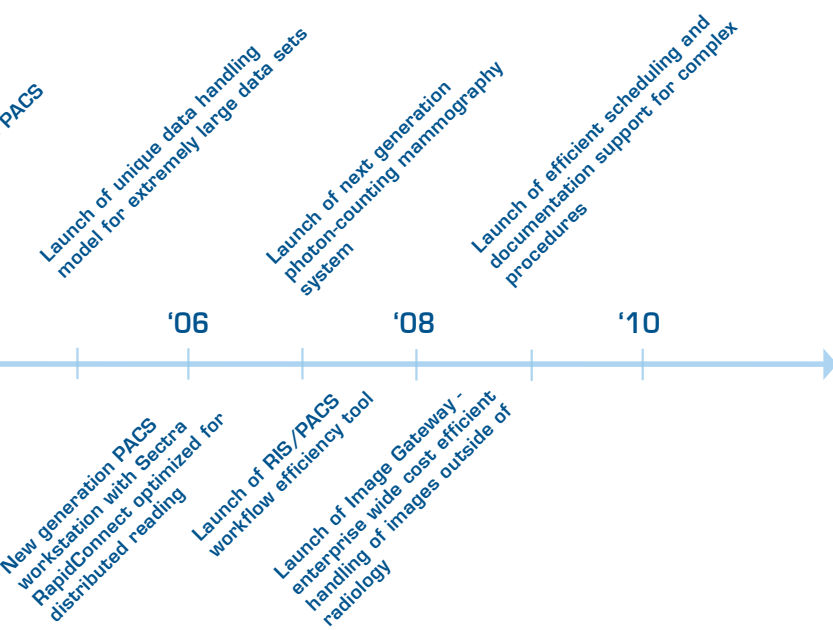
Sectra provides industry-leading PACS/RIS, mammography and orthopaedic solutions. We are committed to transforming your needs into efficient medical imaging solutions. With more than 20 years of leading innovation, Sectra maintains its position at the forefront of medical IT development thanks to close cooperation with top research centers and more than 1,000 customers. This is how we provide the solutions you need, today and tomorrow.

Sectra was founded in 1978 and has its roots in Linköping University in Sweden. Our products are marketed and sold worldwide and Sectra systems have been installed in North America, Scandinavia, most countries in Europe and the Far East. The Sectra share is listed on the Nordic Exchange in Stockholm.

**Sectra's solutions are future-proof—because we think about tomorrow's needs today. And we have the history to prove it.**



\*Sectra MicroDose Mammography is pending FDA approval





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# SECTRA

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