

**Carestream**

# Carestream Healthcare IT Solutions

**Northern Cluster Business Partner Meeting**

**Castricum, September 11**

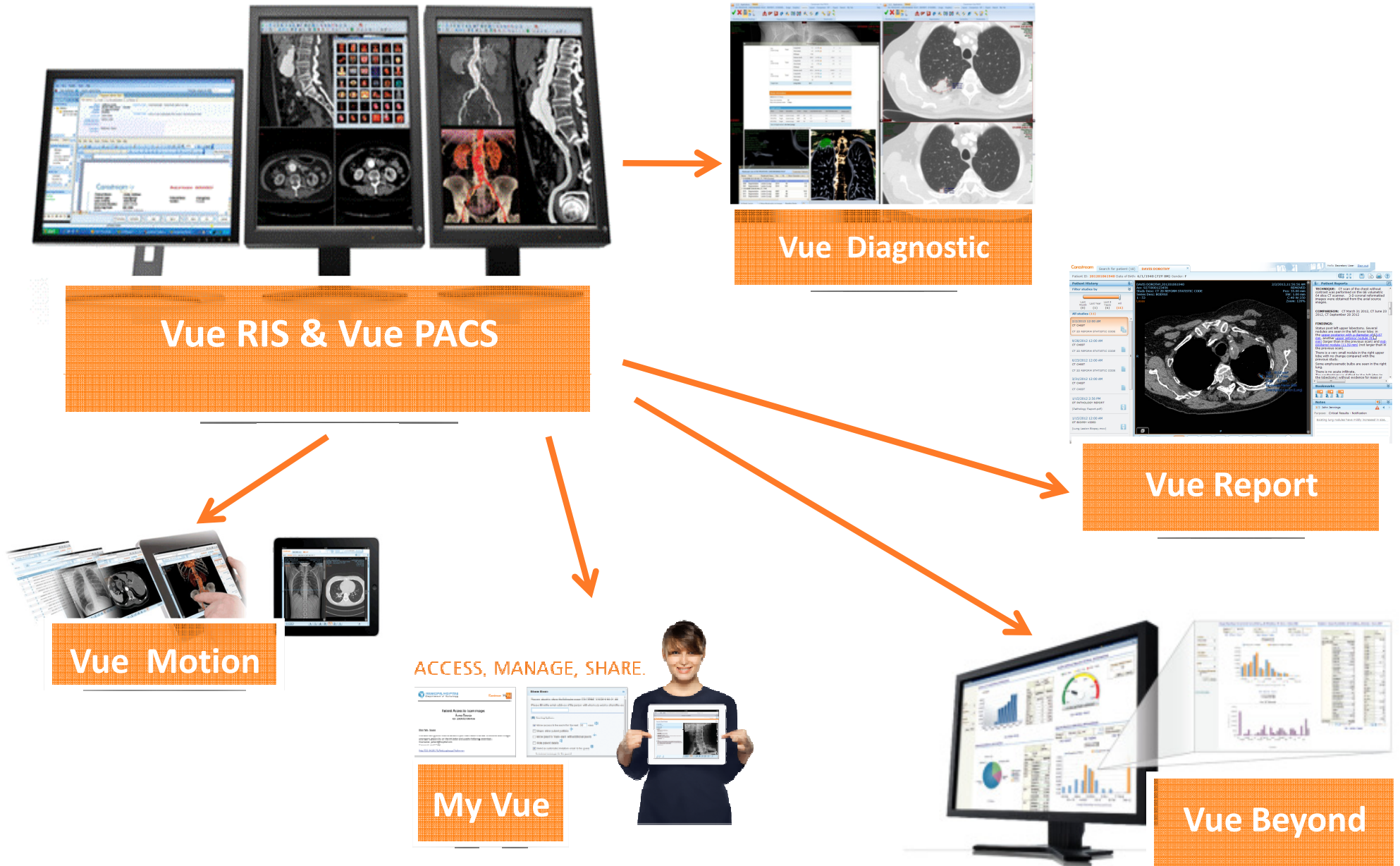
**Ignace Wautier, Healthcare IT BDM Northern Europe**

# What do you know about Carestream Healthcare IT?

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# Carestream Healthcare IT Product Portfolio



# Carestream Healthcare IT Product Portfolio



Vue RIS & Vue PACS

Vue Cardio

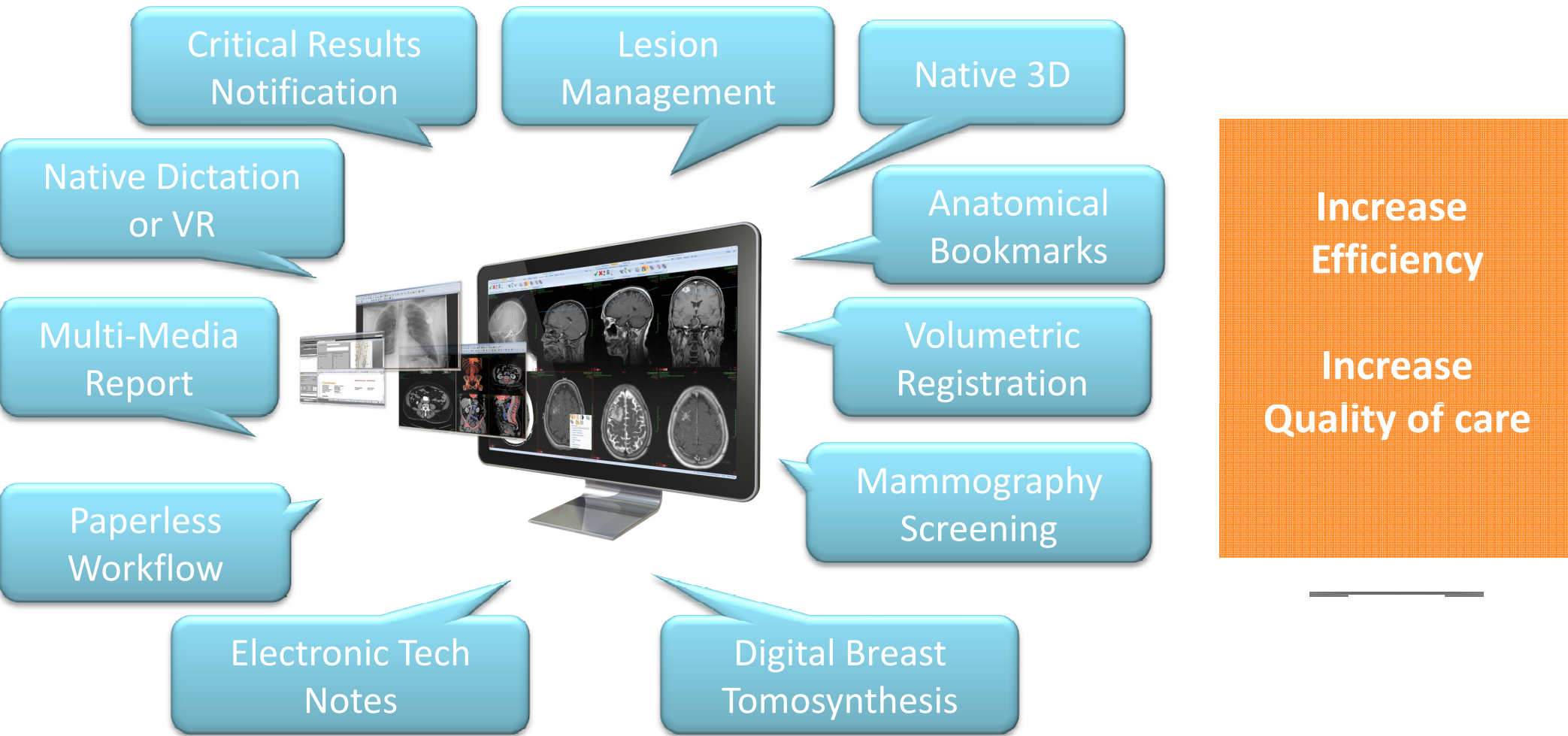


Vue Archive VNA

Other PACS  
Other "Ology"



# Radiology Solution



**VALUE** → Wholistic view of the patient and data on ONE single WS

# Enterprise Viewer

“As a result of this new technology our consultants can see reports faster and learn of a diagnosis more quickly as access to patient results is no longer tethered to a workstation within their consulting room. This will improve workflow and in some cases eliminate the need for the patient to return to the clinic for follow-up.”

John Hill, PACS Manager



**NEWS FLASH!**

Vue Motion receives  
**FDA  
CLEARANCE**

Carestream is the first supplier to receive  
**FDA Clearance for reading** medical images  
on multiple mobile platforms!

Carestream

Vue  
Vue Motion is now cleared for *clinical reading* using iPhone 4S,  
iPad 2, Galaxy Note and Galaxy S III mobile devices.

A collection of mobile devices, including an iPhone, an iPad, a Galaxy Note, and a Galaxy S III, are shown displaying medical images on their screens.

# Patient Involvement

## MyVue, the Patient Portal

### Effortless to Deploy

- Pure Web HTML5 technology to run on various OS and devices using only a Web browser
- Zero overhead, no installation required

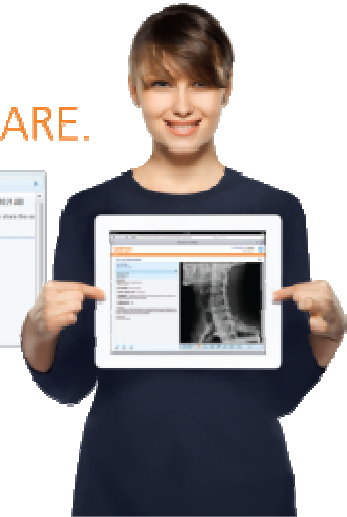
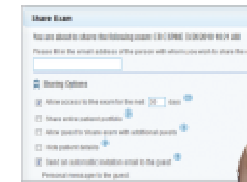
### Easy to Manage

- Customizable setting for administrators: report release, sharing options
- Customizable setting for patients: download options, sharing options

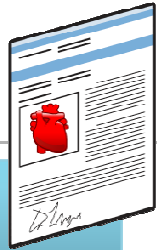
“The most significant outcome was that more than 98 percent of our patients who participated in the trial were so enthusiastic about the product that they decided to continue using it in the future.

Giorgio Benea, MD  
Head of Diagnostic Imaging

ACCESS, MANAGE, SHARE.



# Multimedia Rich Report



Where ever you can see images – you can report

Minimize error and discrepancy

Carestream Vue Reporting enables you to:

- Reduce on-going operational costs as a native module
- Automatically include relevant data from the modalities generated DICOM Structured data into the report
- Embed clinically rich insight such as key images or quantitative analysis into the report
- Incorporate image with the textual report to aid diagnosis and treatment decisions
- Hyperlink and automatic data sharing – Multimedia Report

**COMPARISON:** [-No prior studies are available for comparison.]

**FINDINGS:**  
Evaluation of the right carotid bifurcation region reveals [-no significant-] calcific atherosclerotic disease.  
Evaluation of the left carotid bifurcation region reveals [-no significant-] calcific atherosclerotic disease.  
There is [-antegrade-] flow within the vertebral arteries bilaterally.

**RIGHT CAROTID MEASUREMENTS:**  
Common Carotid Artery <math>[<65.1>]</math> (cm/sec)  
Internal Carotid Artery – proximal <math>[<58.3>]</math> (cm/sec)  
Internal Carotid Artery – mid <math>[<58.7>]</math> (cm/sec)  
Internal Carotid Artery – distal <math>[<45.5>]</math> (cm/sec)  
Internal Carotid/Common Carotid Artery

**LEFT CAROTID MEASUREMENTS:**  
Common Carotid Artery  
Internal Carotid Artery – proximal

**Sunshine Hospital**

**Report Information**  
Name: HATCHER, AMY ID: 200967884365  
Accession: S275000039531 Report: 27/10/2012  
No.:

**Abdominal CTA as of 21 Jan 2013**  
Spiral CT with IV contrast

**Clinical Detail:**  
Abdominal aortic aneurysm. Lumen measuring max 3.3 cm sonographically, including thrombus up to 4.3 cm.

**Findings and Summary:**  
Very irregularly shaped sac-like infrarenal aneurysm that begins 2 cm below the renal arteries, measures 8 cm longitudinally and has a max diameter of 4 + 3.3 cm.

**Key Images**

Signed By  
John Jennings MD

Mark	Min. Diameter (mm)	Max. Diameter (mm)	Mean Diameter (mm)	Area (mm <sup>2</sup> )
D1	2.47	31.84	27.98	866
D2	23.92	27.06	25.89	607
D3	41.87	50.49	48.58	1698
E1	N/A	N/A	N/A	N/A
D4	20.59	27.84	25.41	482
E2	N/A	N/A	N/A	N/A

Segment	Length (mm)	Max Diameter (mm)	Start Mark	End Mark
L1	30.03	31.84	D1	D2
L2	73.59	51.09	D2	E1
L3	25.98	30.9	E1	E2
L4	129.59	61.03	D1	E2

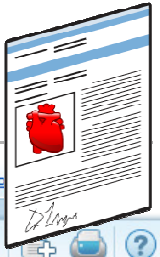
Clinicians appreciate the comprehensive diagnostic report with quantitative measurements, comparison and key images

VALUE

Clinical-context rich report fosters collaboration

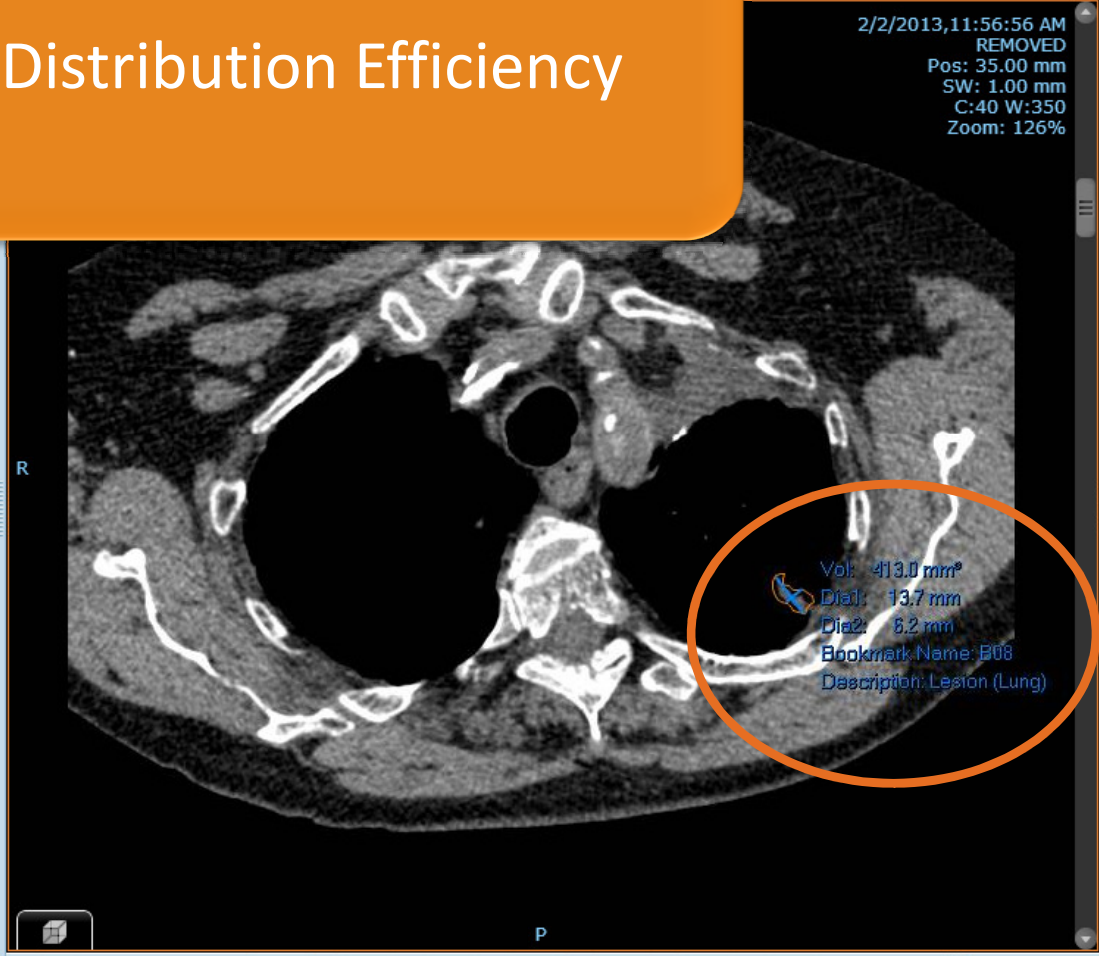


# Multimedia Rich Report



Improves Distribution Efficiency

- 2/2/2013 12:00 AM  
CT CHEST  
CT 2D REFORM STATISTIC CODE
- 9/28/2012 12:00 AM  
CT CHEST  
CT 2D REFORM STATISTIC CODE
- 6/23/2012 12:00 AM  
CT CHEST  
CT 2D REFORM STATISTIC CODE
- 3/31/2012 12:00 AM  
CT CHEST  
CT CHEST
- 1/15/2012 2:56 PM  
OT PATHOLOGY REPORT  
(Pathology Report.pdf)
- 1/15/2012 12:00 AM  
OT BIOPSY VIDEO  
(Lung Lesion Biopsy.mov)



**Patient Reports**

**TECHNIQUE:** CT scan of the chest without contrast was performed on the GE volumetric 64 slice CT scanner. 3-D coronal reformatted images were obtained from the axial source images.

**COMPARISON:** CT March 31 2012, CT June 23 2012, CT September 28 2012

**FINDINGS:**  
 Status post left upper lobectomy. Several nodules are seen in the left lower lobe: in the upper posterior with a diameter of 13.67 mm, another upper anterior nodule (9.1 mm) (larger than in the previous scan) and mid posterior nodule (11.09 mm) (not larger than in the previous scan).  
 There is a very small nodule in the right upper lobe with no change compared with the previous study.  
 Some emphysematic bulbs are seen in the right lung.  
 There is no acute infiltrate.  
 The mediastinum is shifted to the left (due to the lobectomy) without evidence for mass or

**Bookmarks**  
1 2 3

**Notes**  
2/2 John Jennings  
Purpose: Critical Results - Notification  
Existing lung nodules have mildly increased in size.

**VALUE** Increase the Clinical Value of Report for Clinicians with Hyperlink, Quantitative Analysis and Navigation

# Quantitative Analysis (Lesion Management)

Carestream Search for patient (18) **DAVIS DOROTHY**

Patient ID: 201201061940 Date of Birth: 6/1/1940 (72Y 8M) Gender: F

**Patient History**

Filter studies by

Last Month (0) Last Year (1) Last 3 Years (6) All (11)

**All studies (11)**

2/2/2013 12:00 AM CT CHEST  
CT 2D REFORM STATISTIC CODE

9/28/2012 12:00 AM CT CHEST  
CT 2D REFORM STATISTIC CODE

6/23/2012 12:00 AM CT CHEST  
CT 2D REFORM STATISTIC CODE

3/31/2012 12:00 AM CT CHEST  
CT CHEST

1/15/2012 2:56 PM OT PATHOLOGY REPORT  
(Pathology Report.pdf)

1/15/2012 12:00 AM OT BIOPSY VIDEO  
(Lung Lesion Biopsy.mov)

9/20/2012 12:00 AM CR S...

DAVIS DOROTHY, 201201061940  
Acc: 9275000123456  
Study Desc: CT 2D REFORM STATISTIC CODE  
Series Desc: BODYAX  
1 - 53  
Lossy

Report View (DAVIS DOROTHY) - Google Chrome

10.94.195.63/ShowReport.htm?caption=Report%20View%20(DAVIS%20DOROTHY)&ticket=Aji0MAAAAAA

Doc (F06)	Target	Lesion (Lung)	1	00	311	--	9
B07 (F06)	Target	Lesion (Lung)	1	99	362.2	--	11.6
B08 (F07)	Target	Lesion (Lung)	1	53	413	--	13.7

Sum of target lesions (3): 34.3mm (Diameter - RECIST)

The automatic segmented lesions may not have been approved or adjusted

**Change Over Time**

Name	Target	Baseline 2012-03-31	2012-06-23	2012-09-28	2013-02-02 (Current)
F07 Lesion (Lung) Target	Volume (mm <sup>3</sup> )	366.5 (-)	469.9 (+28.2%) ↑	437.9 (+19.5%) ↑	413 (+12.7%) ↑
	Long (mm)	12.9 (-)	13.6 (+5.5%) ↑	12.8 (-1.1%) ↓	13.7 (+5.8%) ↑
	Short (mm)	7.6 (-)	6.8 (-10%) ↓	8.3 (+9.6%) ↑	6.2 (-17.7%) ↓
	Diameter - RECIST (mm)	12.9 (-)	13.6 (+5.5%) ↑	12.8 (-1.1%) ↓	13.7 (+5.8%) ↑
	DT(Days)		234	704	1785
F06 Lesion (Lung) Target	Volume (mm <sup>3</sup> )	378.2 (-)	430.3(+13.8%) ↑	407.8(+7.8%) ↑	362.2 (-4.2%) ↓
	Long (mm)	13.8 (-)	13.1 (-5.6%) ↓	13 (-5.9%) ↓	11.6 (-16.3%) ↓
	Short (mm)	6.3 (-)	6 (-4.3%) ↓	5.4 (-14.1%) ↓	5.9 (-6.3%) ↓
	Diameter - RECIST (mm)	13.8 (-)	13.1 (-5.6%) ↓	13 (-5.9%) ↓	11.6 (-16.3%) ↓
	DT(Days)		451	1666	-4930
F05 Lesion (Lung) Target	Volume (mm <sup>3</sup> )	109.4 (-)	165.4(+51.2%) ↑	228.1(+108.5%) ↑	311 (+184.4%) ↑
	Long (mm)	7.1 (-)	7.3 (+4%) ↑	7.9 (+12.2%) ↑	9 (+27.6%) ↑
	Short (mm)	3.5 (-)	5.1 (+43.9%) ↑	5.7 (+62.6%) ↑	7.3 (+107.5%) ↑
	Diameter - RECIST (mm)	7.1 (-)	7.3 (+4%) ↑	7.9 (+12.2%) ↑	9 (+27.6%) ↑

VALUE

Increase the clinical value of radiology report for clinicians with quantitative analysis and navigation

# Vue Cloud Services

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Cloud can help hospitals transition away from PACS obsolescence

- Modular approach
- Consolidate multi-sites, multi-departments archives with a VNA
- Replacing legacy clinical applications with limited upfront capital investment
- Enabling new collaborative workflows, portals and image exchange

Cloud **lowers TCO** with a better Quality of Service; but the **Power of Community** is the real value of cloud – no limits on licenses for given exam volume.

Cloud for Imaging IT is real, is **proven** (at least with Carestream)



10 Cloud Platforms  
Over 350 Sites  
Over 100 million studies

# More than a Product Portfolio

## Carestream Healthcare IT Mission

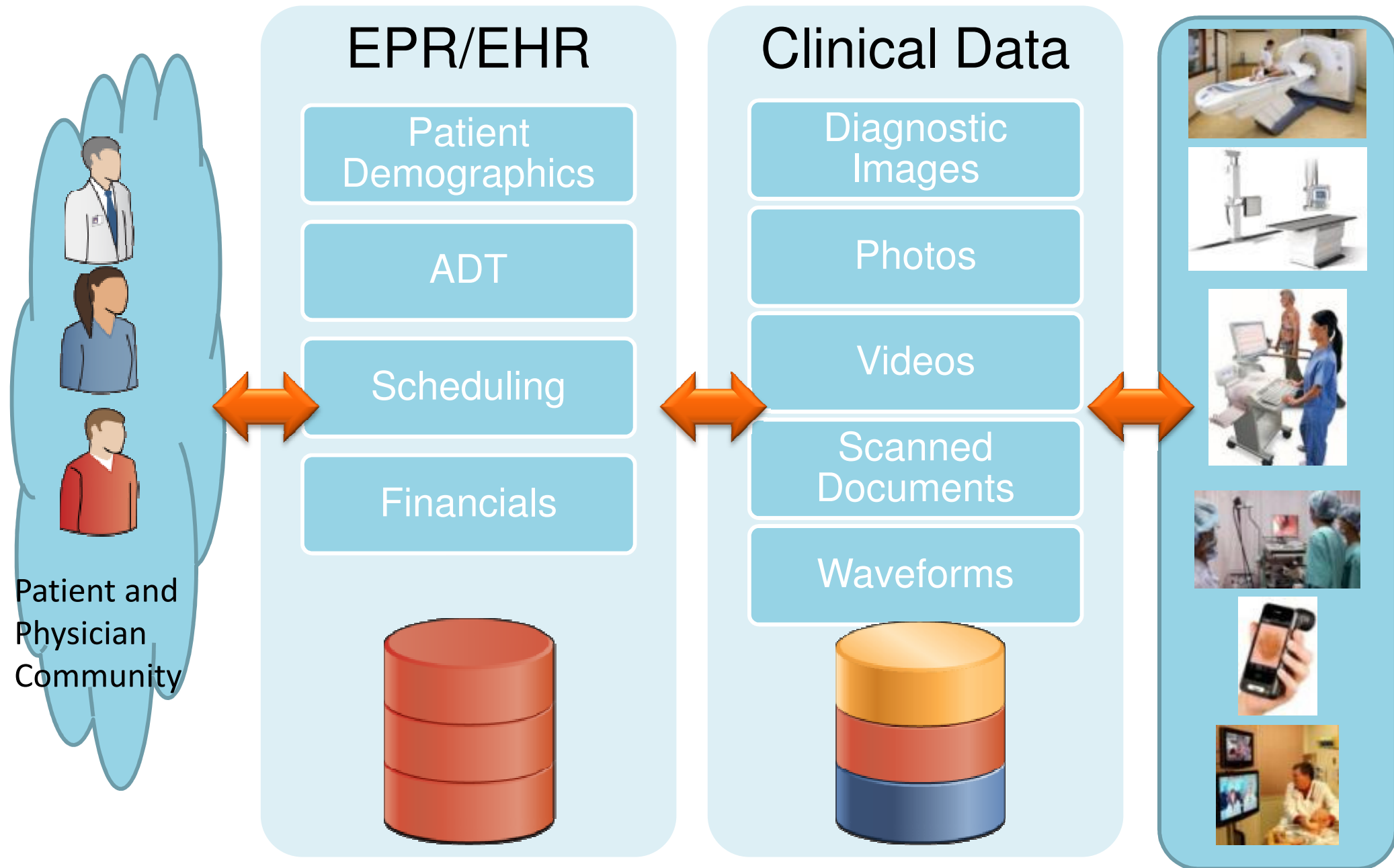
- ▶ Providing information technology solutions that enable better healthcare delivery around the world

## Building Healthcare IT **Solutions** that increase efficiency

- ▶ Solutions to answer customer needs & to solve customer challenges
- ▶ Solutions to improve healthcare efficiency and quality
- ▶ Solutions to place the Patient in the center of the care

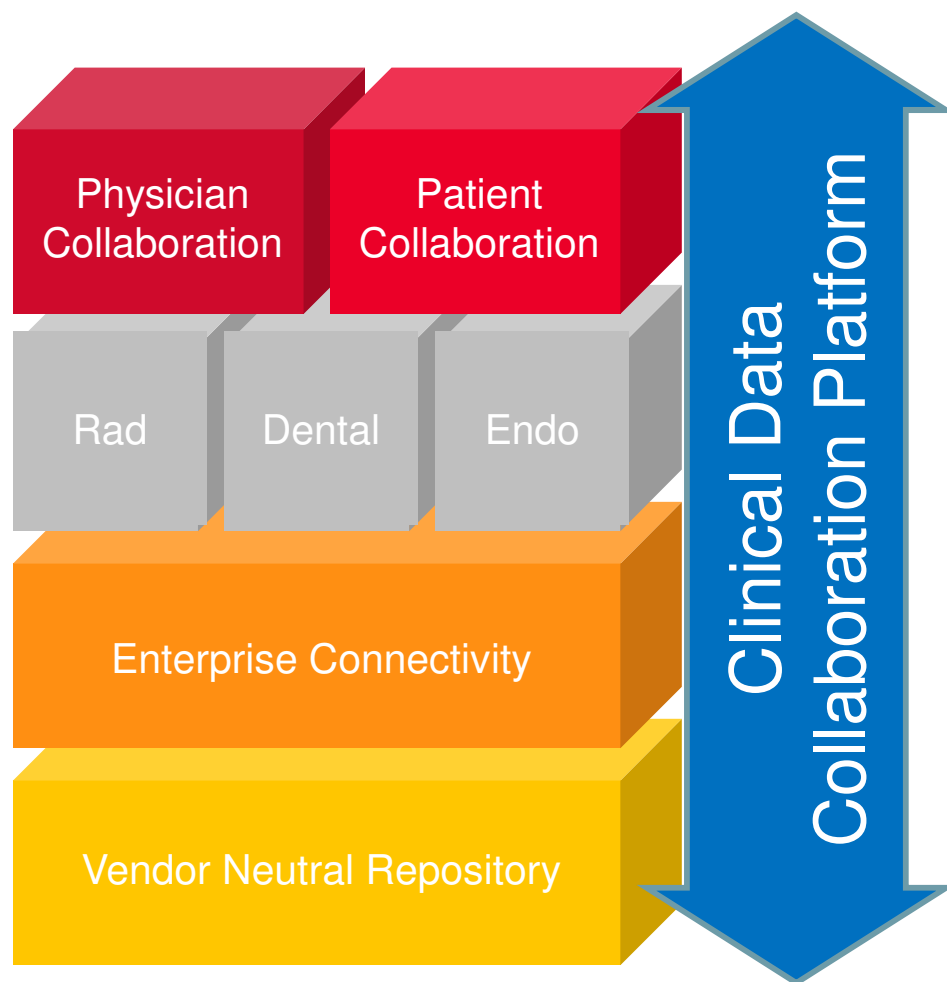
**We are the Clinical Data Workflow Experts**

# Interoperable Ecosystem



# Carestream Clinical Data Collaboration Platform

## We are the Clinical Data Workflow Experts



- Proven to manage large multi-site workflow
- Proven to federate disparate systems
- Proven to interoperate within your enterprise ecosystem

# Clinical Data Collaboration Platform

Administration

Real-time dashboard for intelligent and efficient management

Acquisition

Department Viewer

Enterprise Information System

Clinical Rich Reporting Capability embedded in Web Viewer (\*)

Enterprise Portal

Simple to deploy web-based patient data aggregation , interface & Workflow

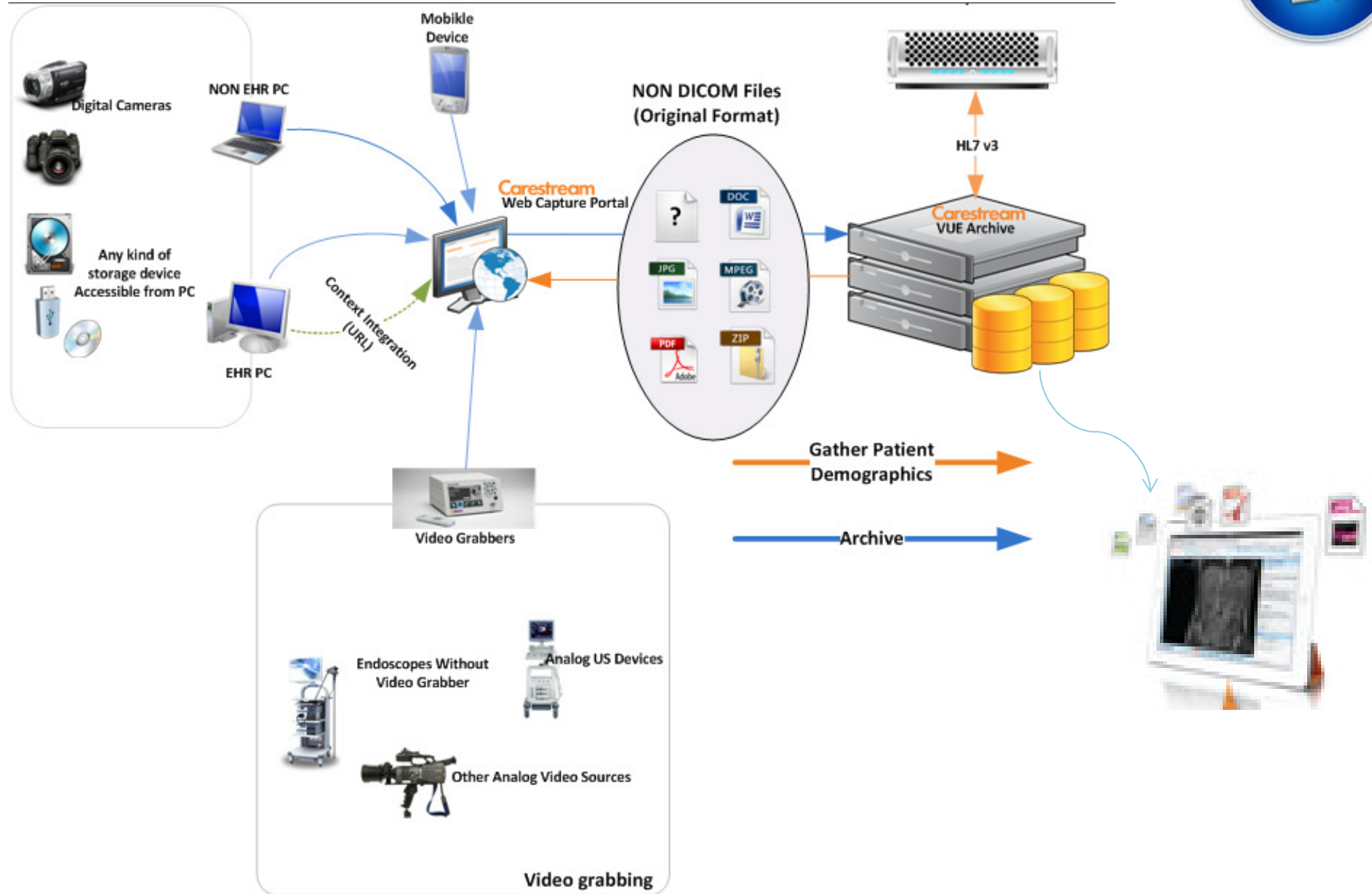
Repository

Patient centric foundation with build-in interoperability, standards based storage.

**VALUE**

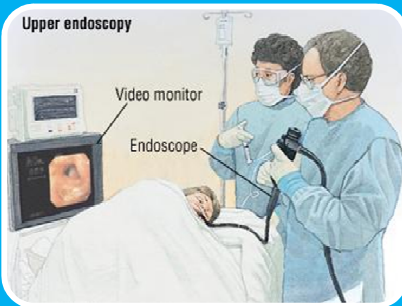
Patient-centric management eliminates information silo's and improves collaboration & EPR Integration

# A Web Portal Solution



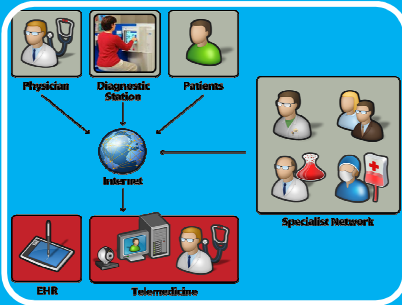


# Solving Customer's Challenges



## Clinical Content Management

- DICOM and Non-DICOM data to be stored and viewed
- Address consolidation of archives and EMR enabled viewer
- Examples such as VNA for Radiology, Cardiology, Endoscopy, Dermatology
- Maintain departmental autonomy while federating multiple workflow



## Telemedicine ("Store and Forward")

- Acquire remotely and distribution of image data
- Focus on shortage of specialty care, quality of care for remote patients
- Examples such as Tele-dermatology, tele-radiology, specialty consultancy
- Enable additional service lines and economical access



## Information Sharing and Exchange

- Clinical images to be shared outside health system
- Focus on interoperability, standards based integration,
- Example such as HIE, Regional Exchanges
- Minimize duplication of exams and costs, enable collaboration within the patient population

# WW major regional IT Healthcare projects

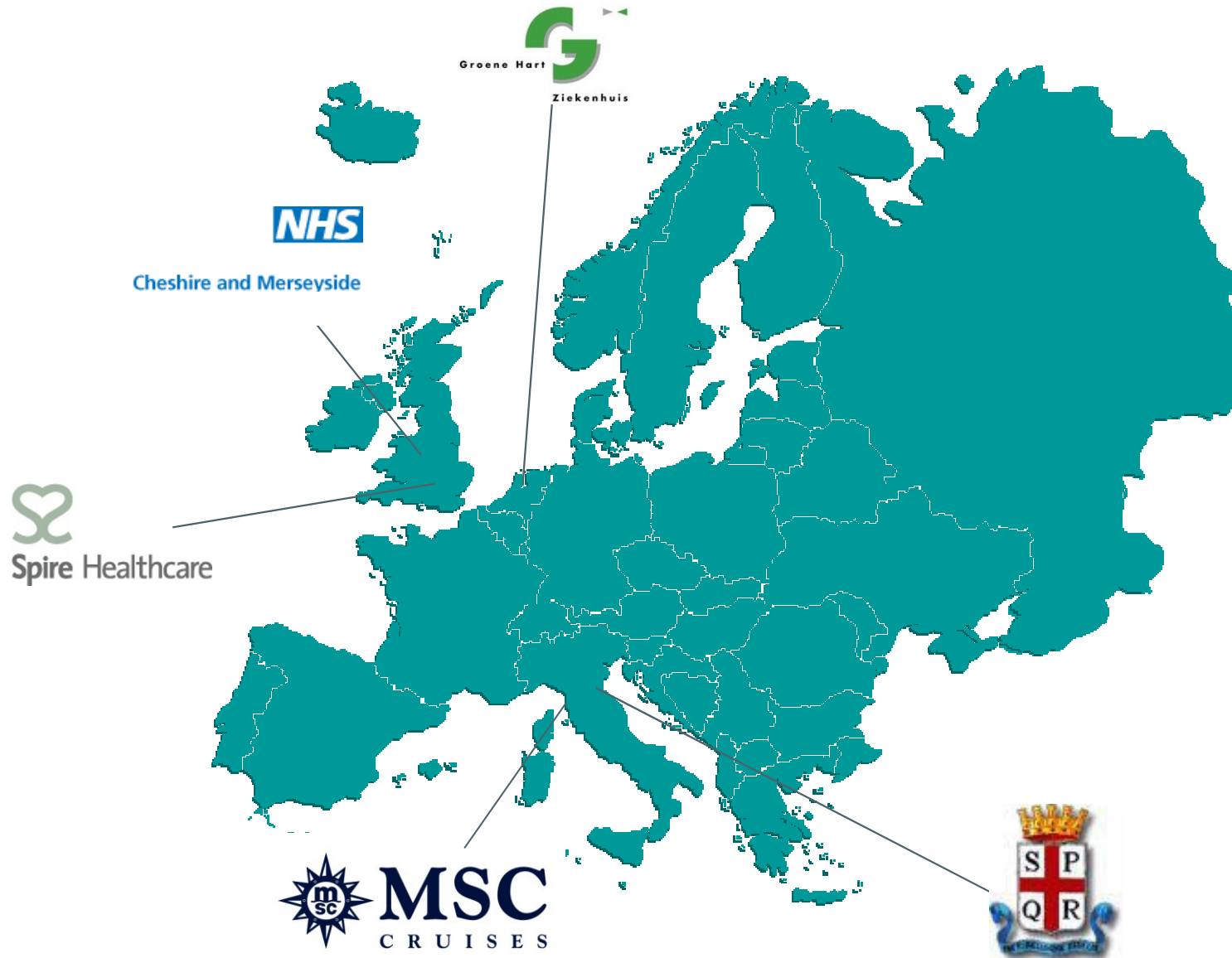


## AT A GLANCE

- Largest HMO's WW like Kaiser & Clalit
- National Programmes NHS Scotland & Singapore Health
- Ministry Of Health Saudi Arabia
- Several Large Regional projects HSO, APHP, South Australia



# EU major Healthcare IT projects



## AT A GLANCE

- Enterprise PACS including Cardio: GHZ Gouda
- Regional Collaboration & Global Worklist: Cheshire & Merseyside
- Vue Cloud & Enterprise distribution: Spire
- Clinical Data Collaboration: Reggio Emilia
- Tele-medicine MSC Cruises

**Carestream**