



Imaging the Next

www.rayence.com



Imaging the Next
Company Profile 2015 **RAYENCE** 

General Information



RAYENCE INTRODUCTION



Rayence Co Ltd, headquartered in South Korea, is the global leading manufacturer and the premier supplier of FPD (Flat Panel Detector) for digital X-Ray imaging system. **Rayence is ready for the full line-up X-Ray detector series based both a-Si TFT and CMOS from small size to large size, in order to supply the customized solution for each medical, dental, veterinary and industrial applications.**

RAYENCE AT A **GLANCE**

Our philosophy

"We provide the best parts and materials so that we can be the greatest partner in offering the best solution for a successful business."

Business Scope

Core components and materials of digital X-ray systems

: FPD / CMOS Detector for Dental, Medical, Veterinary, Industrial X-rays

Image Processing Software

: Software for medical, dental and veterinary diagnosis



Founded

2011

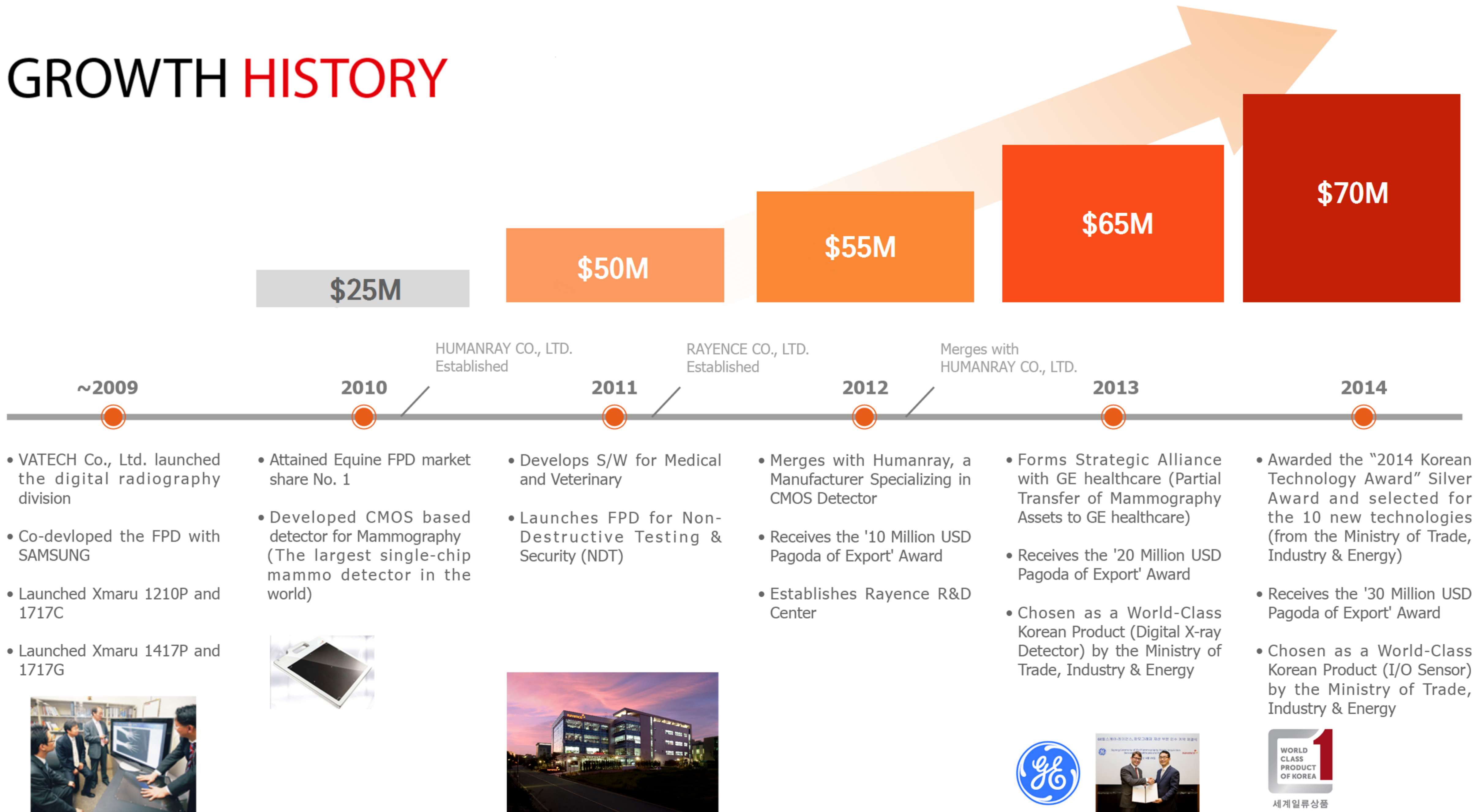
Headquarter Address

14, Samsung 1-ro, 1-gil, Hwaseong-si, Gyeonggi-do, Korea

Employees

222

GROWTH HISTORY



VATECH NETWORKS



- Digital X-ray imaging solutions for Medical, Dental, Veterinary and Industrial applications.
- Image Processing S/W for Medical, Veterinary and Industrial applications.

“Vatech Networks is
a Global Leading Healthcare Company”

APPLICATION GUIDE

MEDICAL



TFT 

Wireless : 1012WCA, 1417WCC / WGC

Wired : 1210SGA, 1417PCA / PGA, 1717SCC / SGC

CMOS

Mammography : 1724SM, 2434LM

Fluoroscopy : 1919CF, 1215CF-MP

VETERINARY



TFT 

Wireless : 1012WCA, 1417WCC / WGC

Wired : 1210SGA, 1417PCA / PGA, 1717SCC / SGC

CMOS

Intra Oral : HDI-1000, HDI-2000

In-vivo CT : 1215MCB

INDUSTRIAL



TFT

NDT / Security : 1012WGB, 1417WGB

CMOS

PCB / Electronics : 0505CF, 0707CF, 1215MGF

DENTAL



CMOS

Intra Oral : HDI-1000 / 2000

CBCT : 1215CF-MP, 2430CF-MP

BUSINESS AREAS

Medical



- General radiography
- Mammography
- Fluoroscopy
- Dental

Veterinary



- Equine / Large animal
- Small animal

Industry



- Security, EOD, NDT
- PCB / Electronics inspection



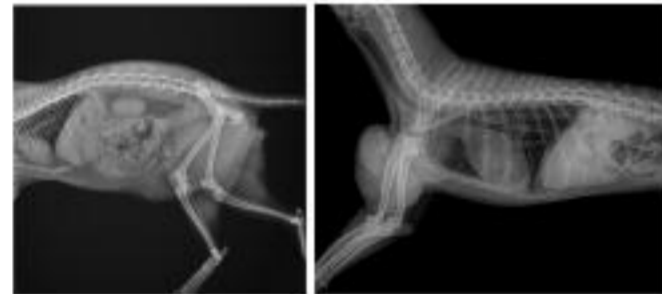
TECHNOLOGY AREAS

TFT Detectors



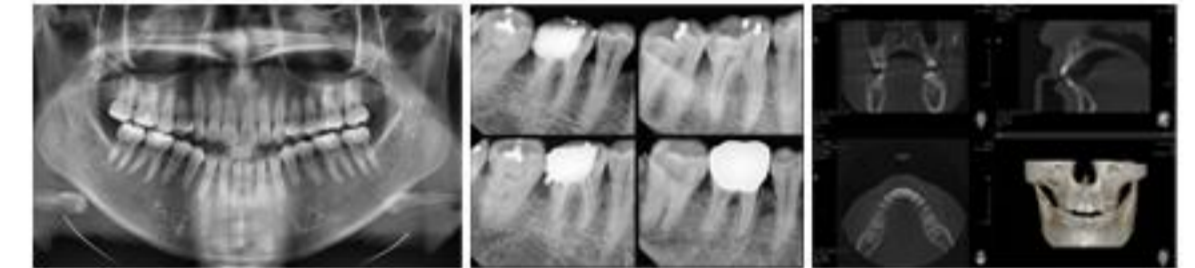
Medical

Equine

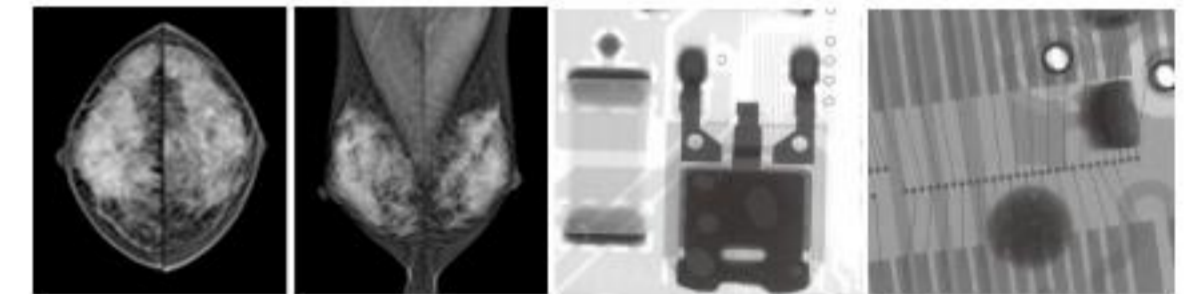


Veterinary

CMOS Detectors



Dental



Mammography

Industry



Image Processing S/W



Medical

Veterinary

Chiropractic



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TFT Detectors

- **Medical / Veterinary**

- 1717SCC / SGC
- 1417WCC / WGC
- 1417PCA / PGA
- 1012WCA
- 1210SGA (Medical)

- **Security / EOD / NDT**

- 1012WGB
- 1417WGB

PRODUCT Detectors

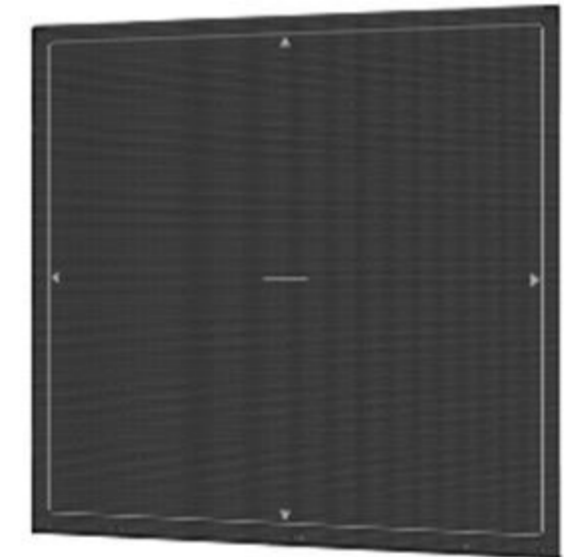
TFT Detectors

- Superior image quality
 - 127 μm pixel pitch
- Varying sizes for flexible use (from 10"x12" to 17"x17")
- Auto-triggering technology
- Easy to upgrade
- Durable construction for reliable operation
 - Water and dust resistance
(*1417WCC, 1417WGB, 1012WGB:IP53, 1417PGB:IP64)
- Image storage

- 17" x 17"
- Wired
- CsI / Gadox



- 14" x 17"
- Wireless / Wired
- CsI / Gadox



- 10" x 12"
- Wireless / Wired
- CsI



TFT Detectors

Medical / Veterinary

1717SCC / SGC

Universal and affordable solution with wide coverage

- Full-field, 17 x 17 inch active area
- Ideal for table and upright wall stands
- Install in less than (1) hour
- Auto-triggering technology



1717SCC / SGC

1417WCC / WGC

1417PCA / PGA

1012WCA

1210SGA

1012WGB / 1417WGB

TFT Detectors

Medical / Veterinary

1417WCC / WGC

Providing increased workflow efficiency in the X-ray room and beyond

- Lightweight, seamless, carbon-fiber construction
- Shock, vibration and scratch resistant composition (IP53)
- Complies with ISO 4090 cassette size standards
- Ideal for in-room and portable imaging
- Auto-triggering technology



1717SCC / SGC

1417WCC / WGC

1417PCA / PGA

1012WCA

1210SGA

1012WGB / 1417WGB

TFT Detectors

Medical / Veterinary

1417PCA / PGA

Economical choice for superior image quality

- Ergonomically designed detachable handle
- Ideal for in-room and mobile imaging
- Install in less than (1) hour
- Auto-triggering technology



1717SCC / SGC

1417WCC / WGC

1417PCA / PGA

1012WCA

1210SGA

1012WGB / 1417WGB

TFT Detectors

Medical / Veterinary

1012WCA

Compact design, greater flexibility

- Offers a wide range of flexibility
- Ergonomically designed detachable handle
- Ideal for Orthopedic and Pediatric use
- Auto-triggering technology



1717SCC / SGC

1417WCC / WGC

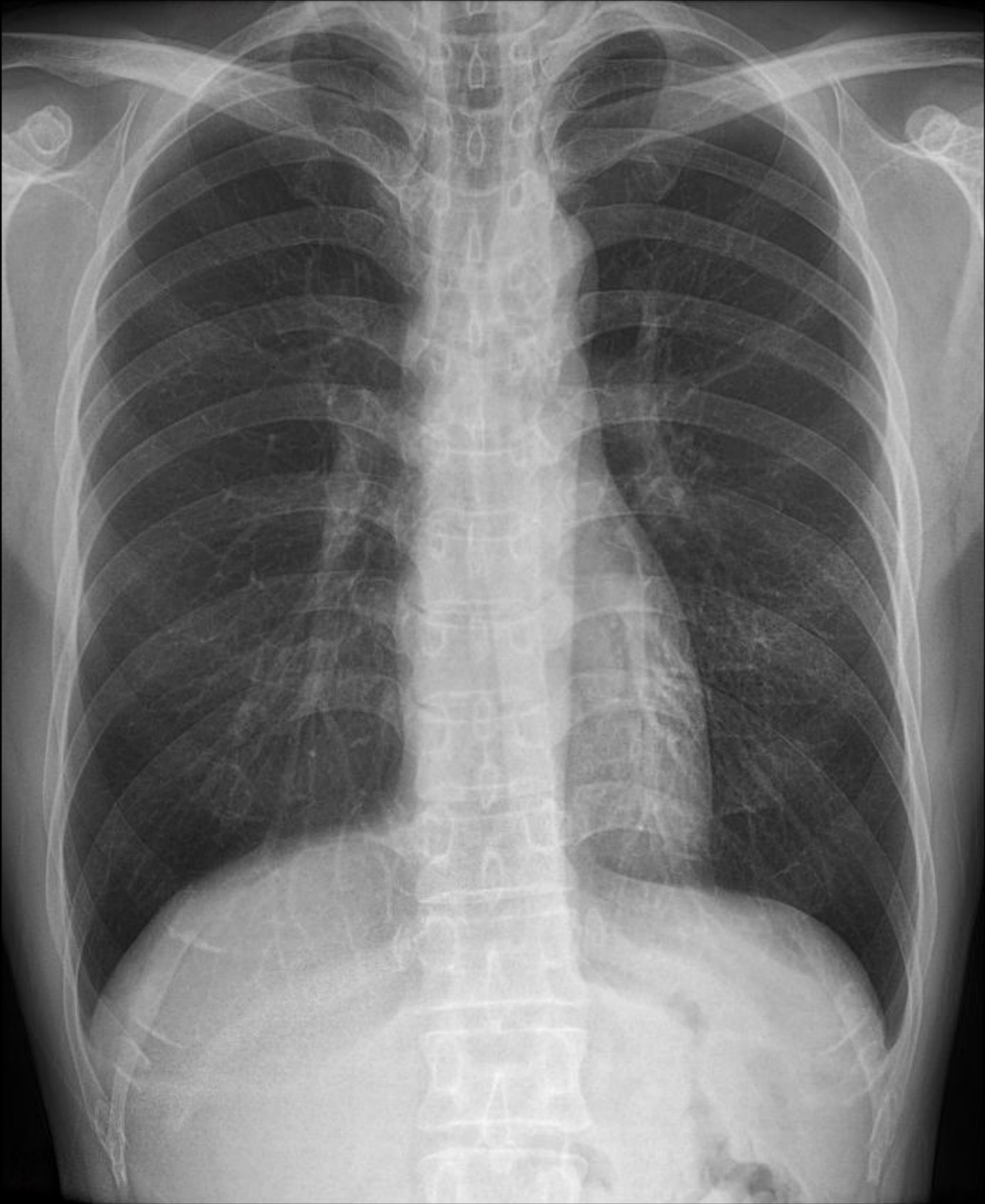
1417PCA / PGA

1012WCA

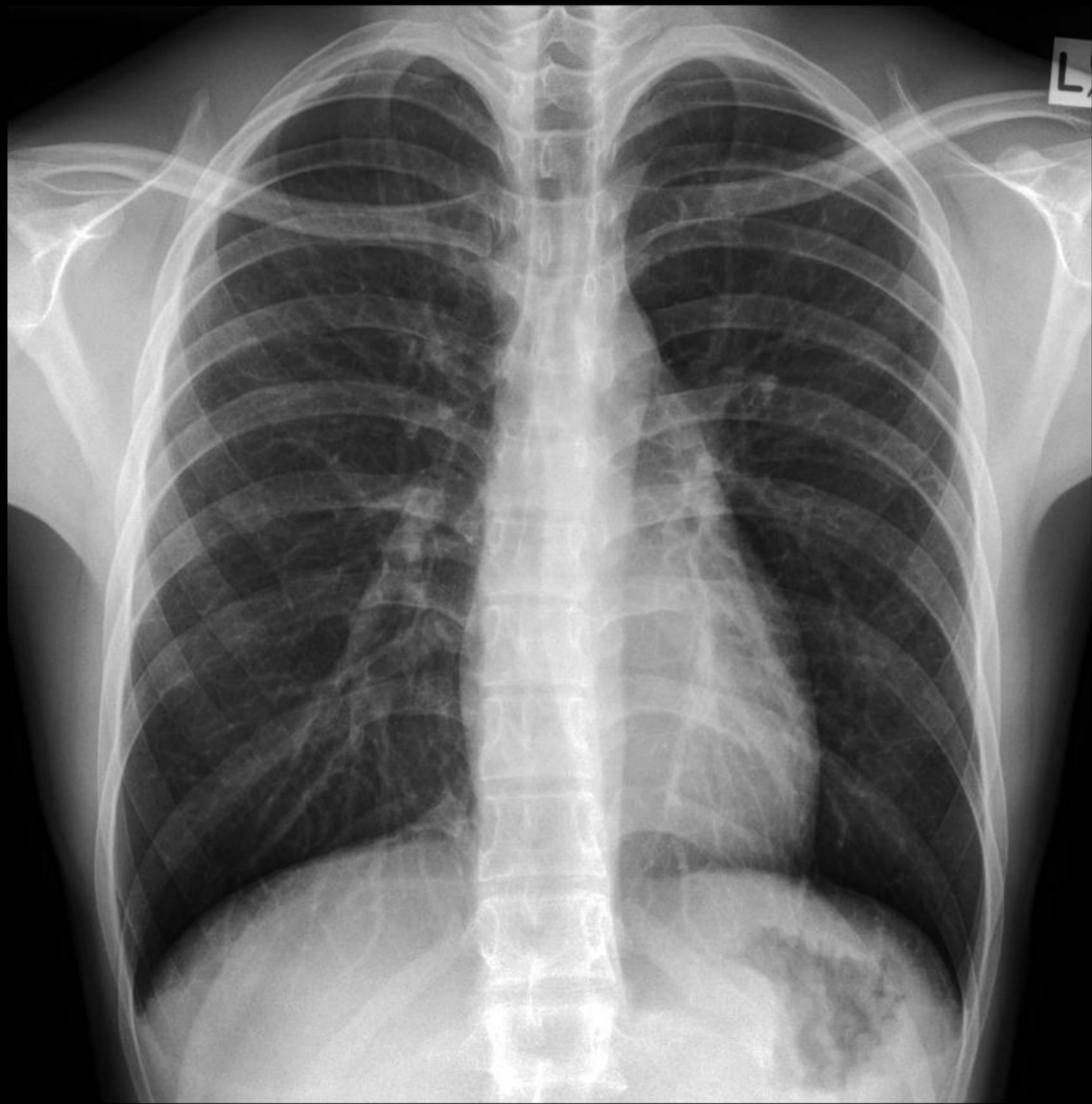
1210SGA

1012WGB / 1417WGB

MEDICAL IMAGE



MEDICAL IMAGE



MEDICAL IMAGE



TFT Detectors

Medical / Veterinary

1012WCA

Compact design, greater flexibility

- Offers a wide range of flexibility
- Ergonomically designed detachable handle
- Ideal for Orthopedic and Pediatric use
- Auto-triggering technology



1717SCC / SGC

1417WCC / WGC

1417PCA / PGA

1012WCA

1210SGA

1012WGB / 1417WGB

VETERINARY **IMAGE** (SMALL ANIMAL)



VETERINARY **IMAGE** (EQUINE)



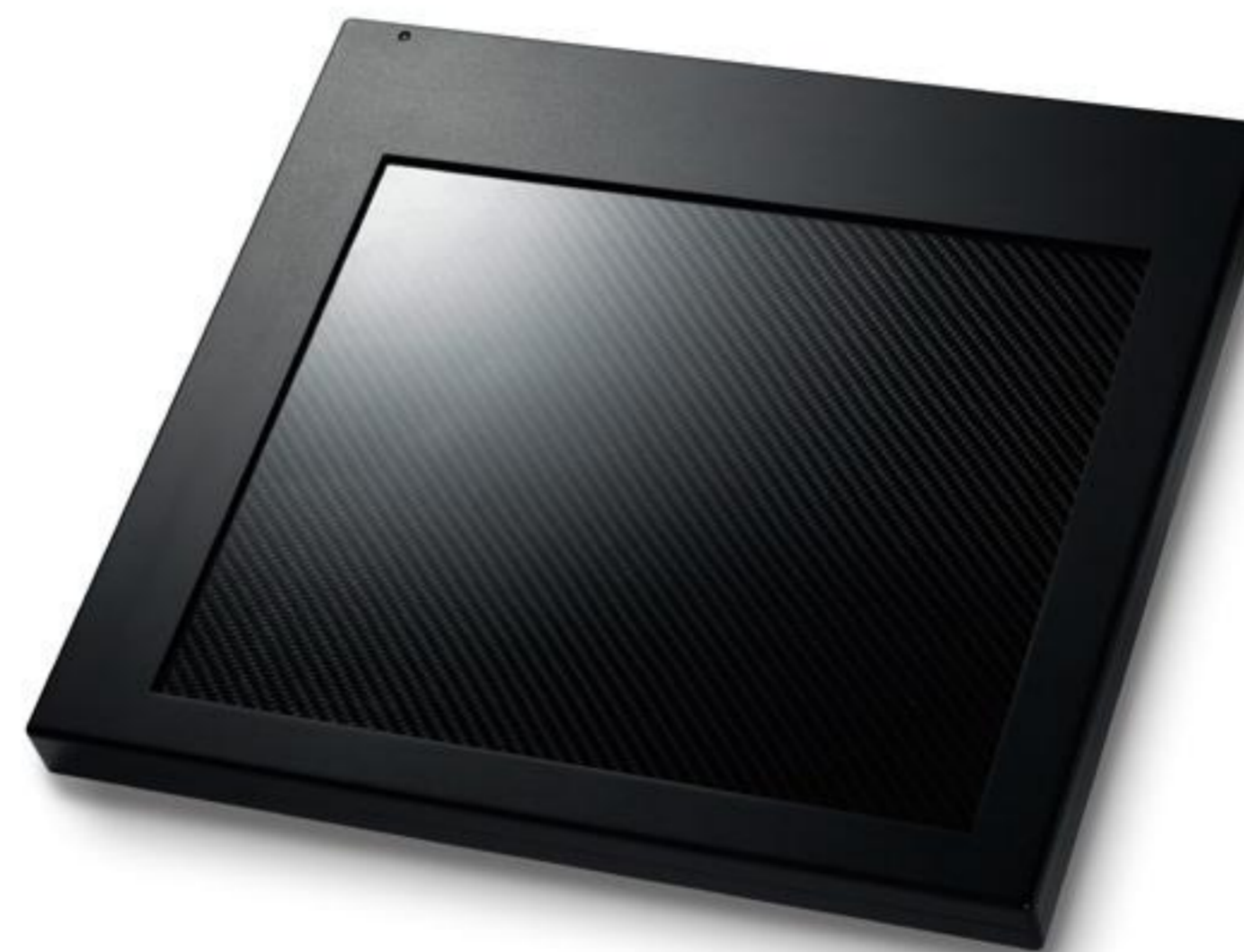
TFT Detectors

Medical

1210SGA

Versatile and affordable flat panel detector

- Offers a versatile range of clinical applications
- Ideal for Podiatry use
- Install in less than (1) hour
- Auto-triggering technology



1717SCC / SGC

1417WCC / WGC

1417PCA / PGA

1012WCA

1210SGA

1012WGB / 1417WGB

TFT Detectors

Security / EOD / NDT

1012WGB / 1417WGB

Wireless, reliable and smart solution for NDT

- IP 53 rated, 1.0 m drop test passed
- Robust design (Mg case)
- Light weight and removable handle
- Minimized dead space (8.5mm)
- High energy range (40 ~ 330Kvp, Ir-192)



▲ 1012WGB

▲ 1417WGB

1717SCC / SGC

1417WCC / WGC

1417PCA / PGA

1012WCA

1210SGA

1012WGB / 1417WGB

Rayence's **Software**



TFT Software

CONSOLE SOFTWARE

Rayence's console software provides complete image management, featuring easy data searching, fast image acquisition and user friendly functions such as image viewing, reprocessing, optimizing and archiving.

- Easy and Induitive GUI
- Professional Image Processing
- DICOM3.0 Compliant System
- Auto Stitching



Xmaru View V1



VETVIEW VV Console

XmaruView V1 / VetView Console

XmaruView PACS

TFT Software

PACS SOFTWARE

Xmaru PACS is a scalable and affordable Picture Archiving and Communication system tailored to the needs of small, single-site imaging environments such as Chiropractic and Orthopedic clinics and primary care and specialty medical practices. Xmaru PACS is designed to support up to six modalities allowing you to quickly and easily acquire, view and manage any type of DICOM medical images.



Xmaru PACS

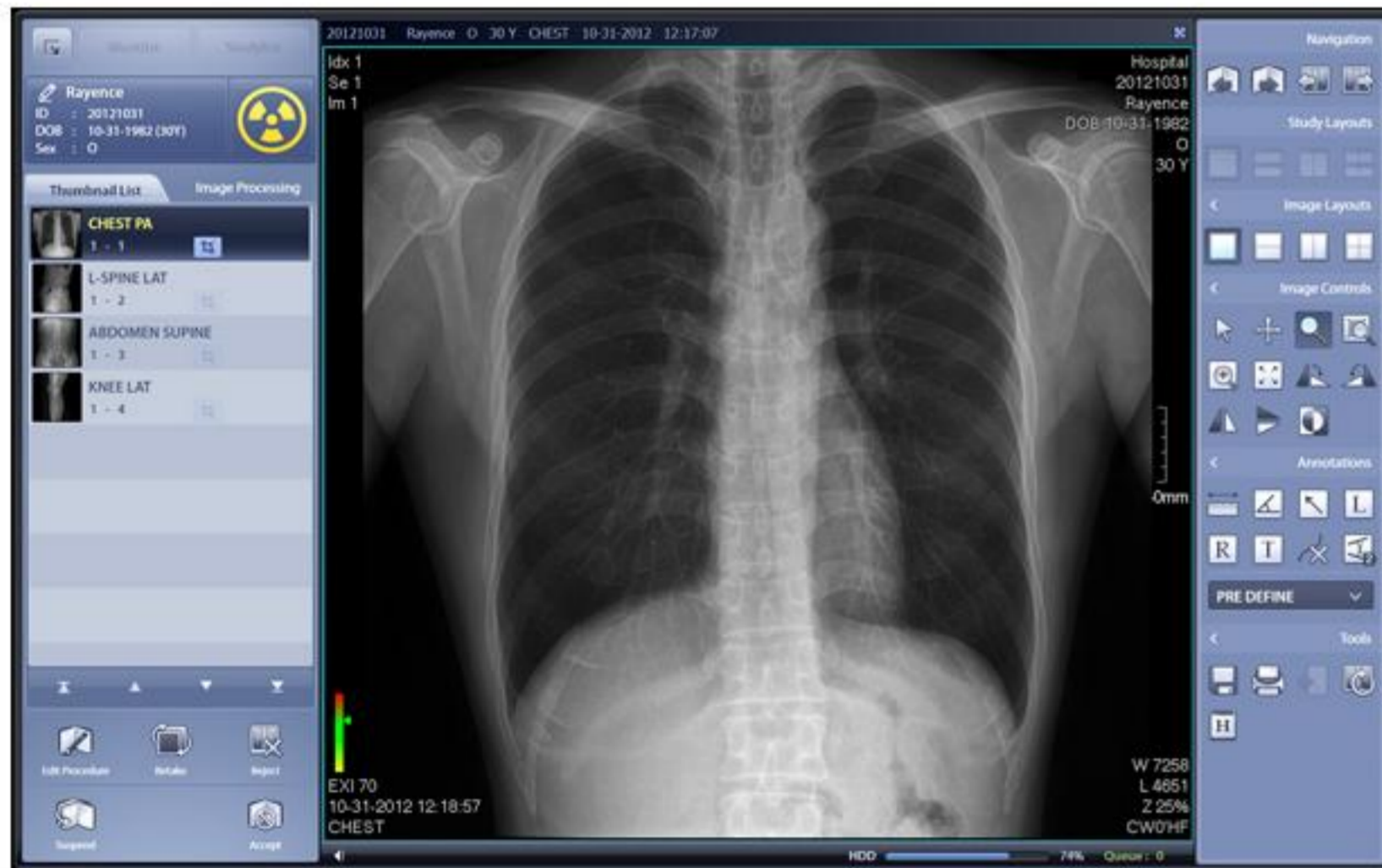
XmaruView V1 / VetView Console

XmaruView PACS

EASY & INTUITIVE GUI

Operator-friendly console

- Unprecedented easy workflow
- Large screen console
- Short learning curve



Xmaru View V1
(Medical)



VxV Console
(Veterinary : Small Animal)



VxV Console
(Veterinary : Equine)

Worklist Studylist

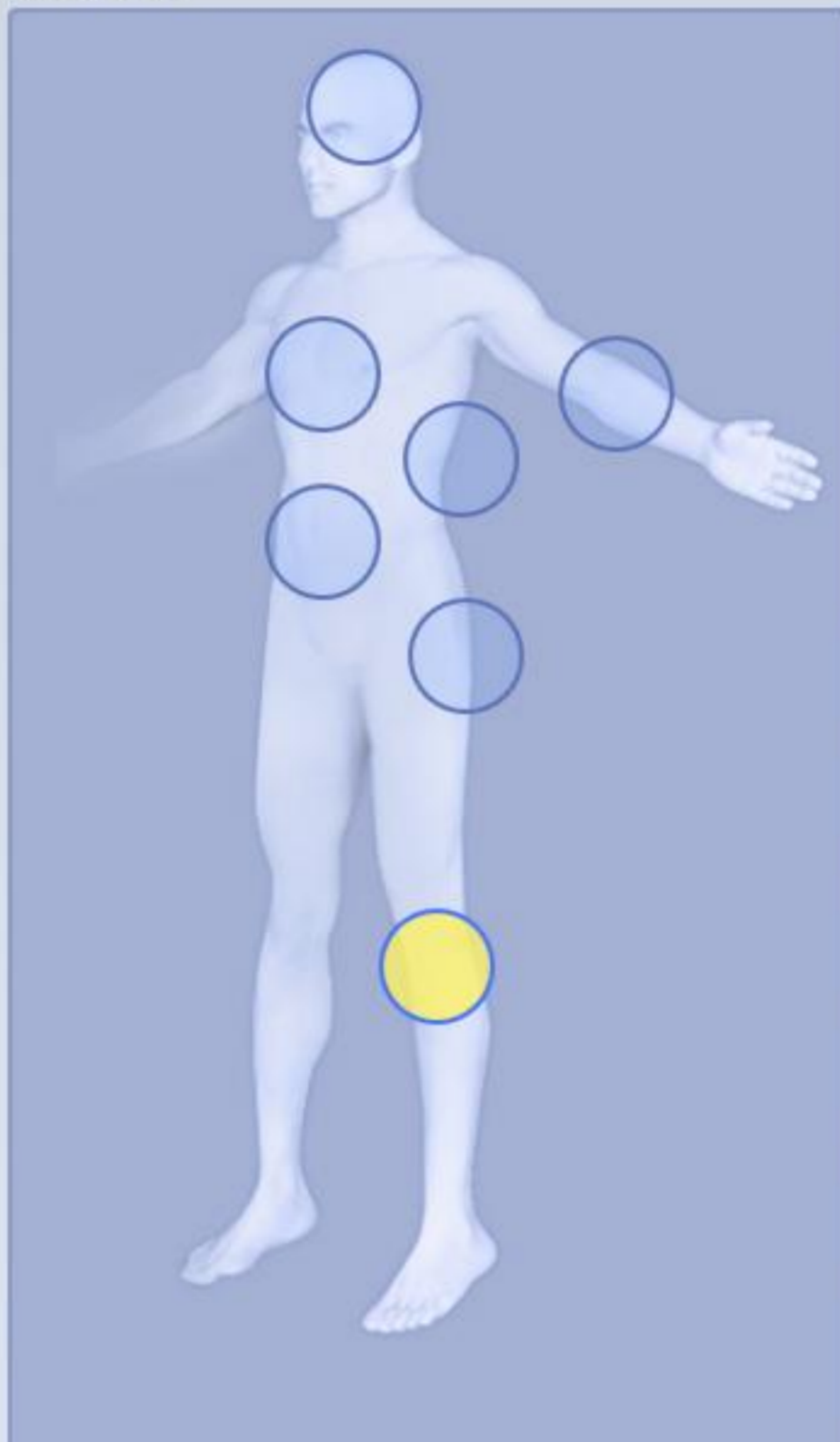
Rayence
 ID : 20121031
 DOB : 10-31-1982 (30Y)
 Sex : O

Thumbnail List

CHEST PA
1 - 1

Procedure

BodyParts



Procedure Code / Procedure Step

FEMUR AP/LAT	KNEE SERIES	KNEE AP/LAT
TIBIA SERIES	TIBIA AP/LAT	ANKLE SERIES
ANKLE AP/LAT	FOOT SERIES	TOE AP/LAT
CALCANEUS LAT/AXIAL		
FEMUR AP	FEMUR LAT	FEMUR OBL
KNEE AP	KNEE LAT	KNEE OBL
KNEE SUNRISE	TIBIA AP	TIBIA LAT
TIBIA OBL	ANKLE AP	ANKLE LAT
ANKLE OBL	FOOT AP	FOOT OBL
FOOT LAT	TOE AP	TOE LAT

Scheduled Procedure Step

CHEST PA

L-SPINE LAT

ABDOMEN SUPINE

KNEE LAT

Delete Delete All

Capture Cancel

Navigation



Study Layouts



Image Layouts



Image Controls



RE DEFINE

Tools



Edit Procedure Retake Reject

Suspend Accept

Worklist Studylist

Rayence
ID : 20121031
DOB : 10-31-1982 (30Y)
Sex : O



Thumbnail List Image Processing

- CHEST PA**
1 - 1
- L-SPINE LAT
1 - 2
- ABDOMEN SUPINE
1 - 3
- KNEE LAT
1 - 4

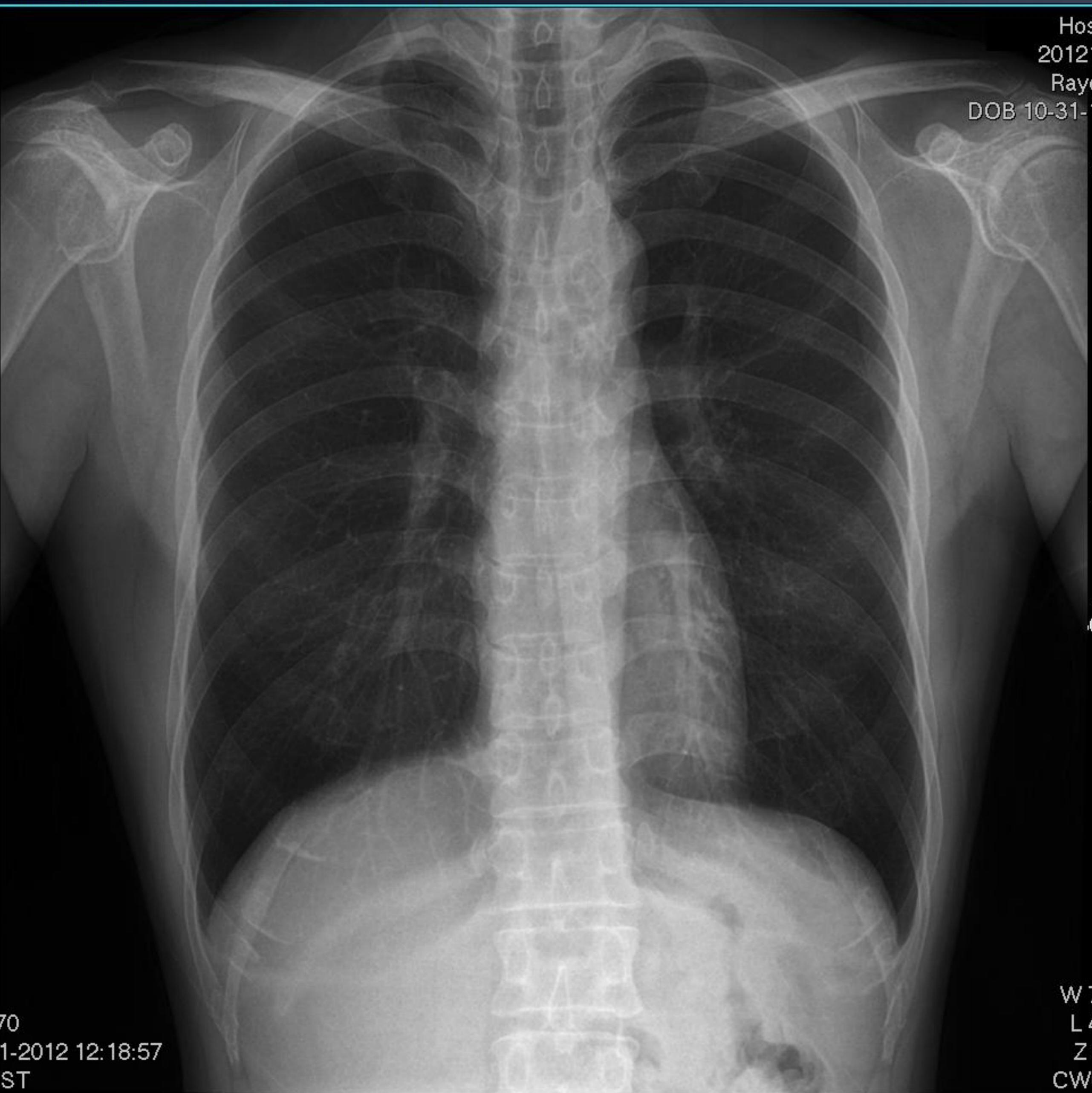
Navigation arrows

Edit Procedure Retake Reject

Suspend Accept

20121031 Rayence O 30 Y CHEST 10-31-2012 12:17:07

Idx 1
Se 1
Im 1



Hospital
20121031
Rayence
DOB 10-31-1982
O
30 Y



EXI 70
10-31-2012 12:18:57
CHEST

W 7258
L 4651
Z 25%
CW0'HF

Navigation

Study Layouts

Image Layouts

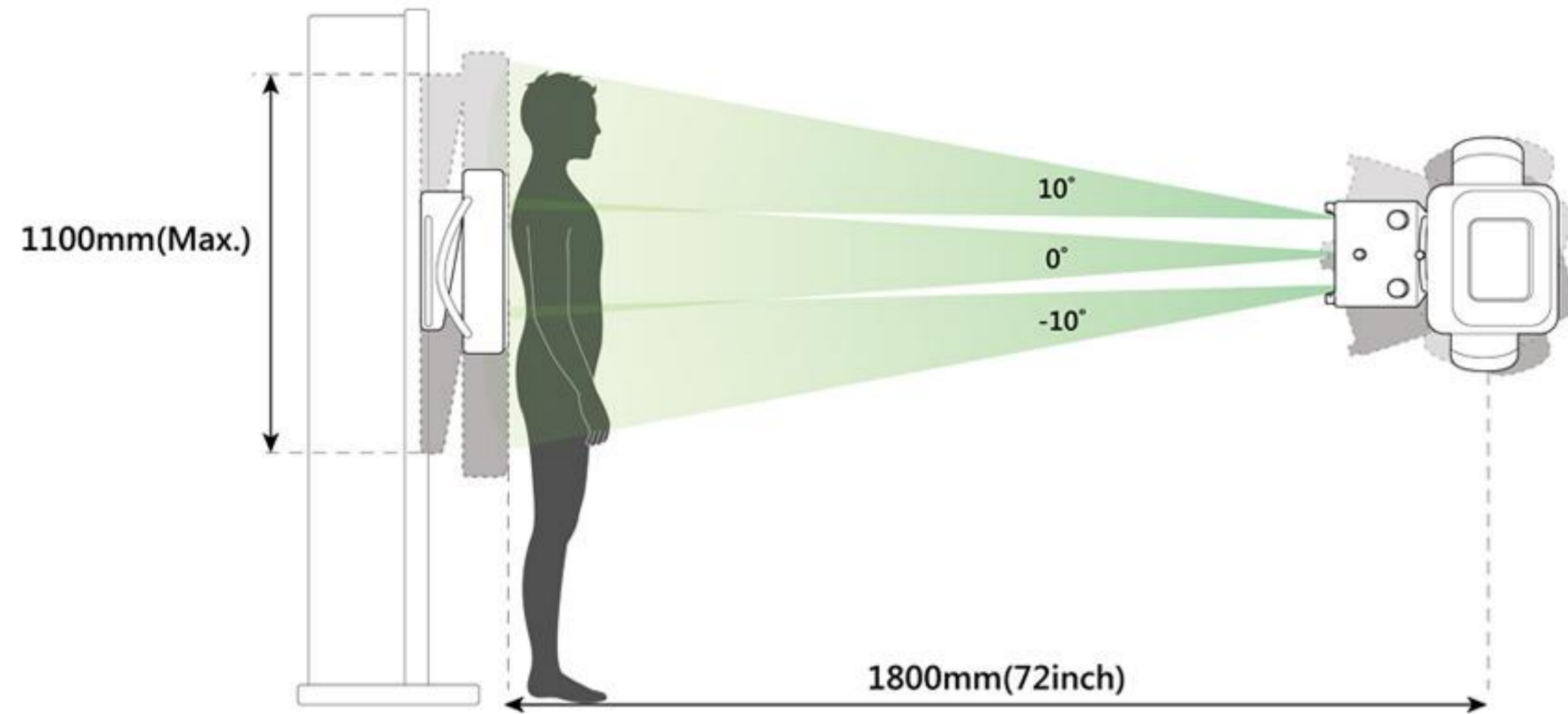
Image Controls

Annotations

Tools

AUTOMATIC IMAGE STITCHING

- Easy acquisition of long leg or spine images
- Stationary applications are available with stitching function
- No extra workstation required



AUTOMATIC IMAGE STITCHING



Patient ID

Patient Name

Accession No.

10-31-2012

10-31-2012

Today

Yesterday

7 Days

Study Description

Sche. & Susp.

Any BodyPart

DX

Owner Name

3 Months

6 Months

1 Year



Search



New Patient



Delete

No.	Acc. No.
1	1210311534200
2	1210311534070
3	1210311533510
4	1210311533400
5	1210311532110

Procedure

BodyParts



THORAX

CANINE

FELINE

EXOTIC

EQUINE

Procedure Code / Procedure Step

THORAX LAT / VD

RT THORAX

LT THORAX

SCAPULA

RIB

Scheduled Procedure Step

Delete

Delete All

Capture

Cancel



Start Study



Edit Procedure

Patient ID

Patient Name

Accession No.

10-31-2012

10-31-2012

Today

Yesterday

7 Days

Study Description

Sche. & Susp.

Any BodyPart

DX

Owner Name

3 Months

6 Months

1 Year



Search



New Patient



Delete

No.	Acc. No.
1	1210311534200
2	1210311534070
3	1210311533510
4	1210311533400
5	1210311532110

Procedure

BodyParts

Procedure Code / Procedure Step

Scheduled Procedure Step



HIND LEG RIGHT

RT FEMUR

RT PATELLA

RT TIBIA

RT CALCANEUS

RT TARSUS

RT METATARSUS

RT PHALANGE

Delete

Delete All

CANINE

FELINE

EXOTIC

EQUINE

Capture

Cancel



Start Study



Edit Procedure



Imaging the Next

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CMOS Detectors

- **Mammography**
 - 1724SM
 - 2343LM
- **Surgical C-arm / In-vivo CT / CBCT**
 - 1919CF
 - 2430CF-MP
 - 1215CF-MP
 - 1215MCB
- **Intra Oral**
 - HDI-1000/2000
- **Industrial 2D/3D inspection / Industrial CT**
 - 0505CF
 - 0707CF
 - 1215MGF

PRODUCT Detectors

CMOS Detectors

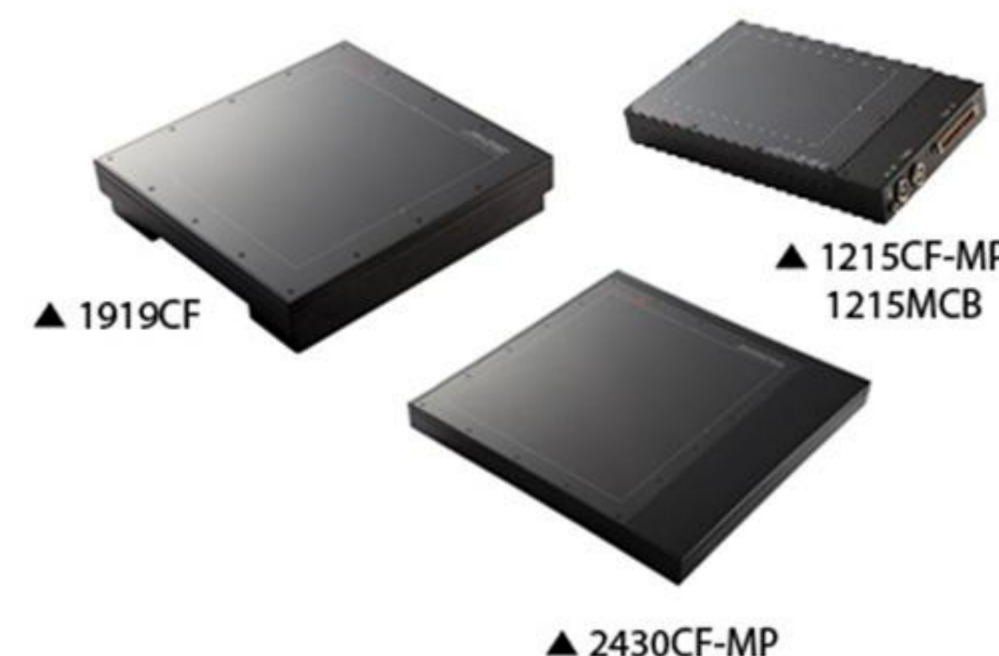
- Varying sizes for flexible use (from 2.4cm x 3.0cm to 24cm x 34cm)
- High DQE
- High spatial resolutions from $20\mu\text{m}$ to $200\mu\text{m}$ pixels
- Static and dynamic imaging
- Low noise and fast readout without an image lag
- Easy integration into various applications



- 5x5cm, 7x7cm, 12x15cm
- Applications
 - Industrial 2D/3D inspection
 - Industrial CT



- 17x24cm, 24x34cm
- Applications
 - Mammography



- 12x15cm, 19x19cm, 20x34cm
- Applications
 - Surgical C-arm
 - In-vivo CT
 - CBCT

CMOS Detectors

Digital Mammography

1724SM / 2434LM

World's First CMOS-based FFDM detector

- High DQE [Detective Quantum Efficiency]
- Excellent Noise Performance
- No Image Lag
- Low Power Consumption
- Cold Start - No need warm-up time
- Less Sensitive to Surroundings
- Fully Supported for Breast Tomosynthesis



▲ 1724SM



▲ 2434LM

1724SM / 2434LM

1215CF-MP / 1215MCB / 1919CF / 2430CF-MP

HDI-1000 / HDI-2000

0505CF / 0707CF / 1215MGF

PRESS RELEASE

GE Healthcare Agrees to Acquire Certain Assets of Rayence, a Subsidiary of Vatech, Acknowledging Korea's Technology in Mammography



GE Healthcare to provide a quality solution with affordable costs while broadening mammography portfolio by acquiring Value Digital Mammography

SEOUL, Korea, Jun 21, 2013 (BUSINESS WIRE) -- --The acquisition represents GE Korea's growth strategy, "In Korea, For the World"

--Win-win partnership will create a platform for Rayence to enter overseas markets achieved through the supply contract of CMOS detector

GE Healthcare **GE, -0.08%** today announced that it has agreed to acquire certain Mammography assets of Rayence, a subsidiary of Vatech Co Ltd (kosdaq:043150), a Korean X-Ray manufacturer. The Mammography assets of Rayence will, at closing, become part of the Detection & Guidance Solutions (DGS) business unit of GE Healthcare.

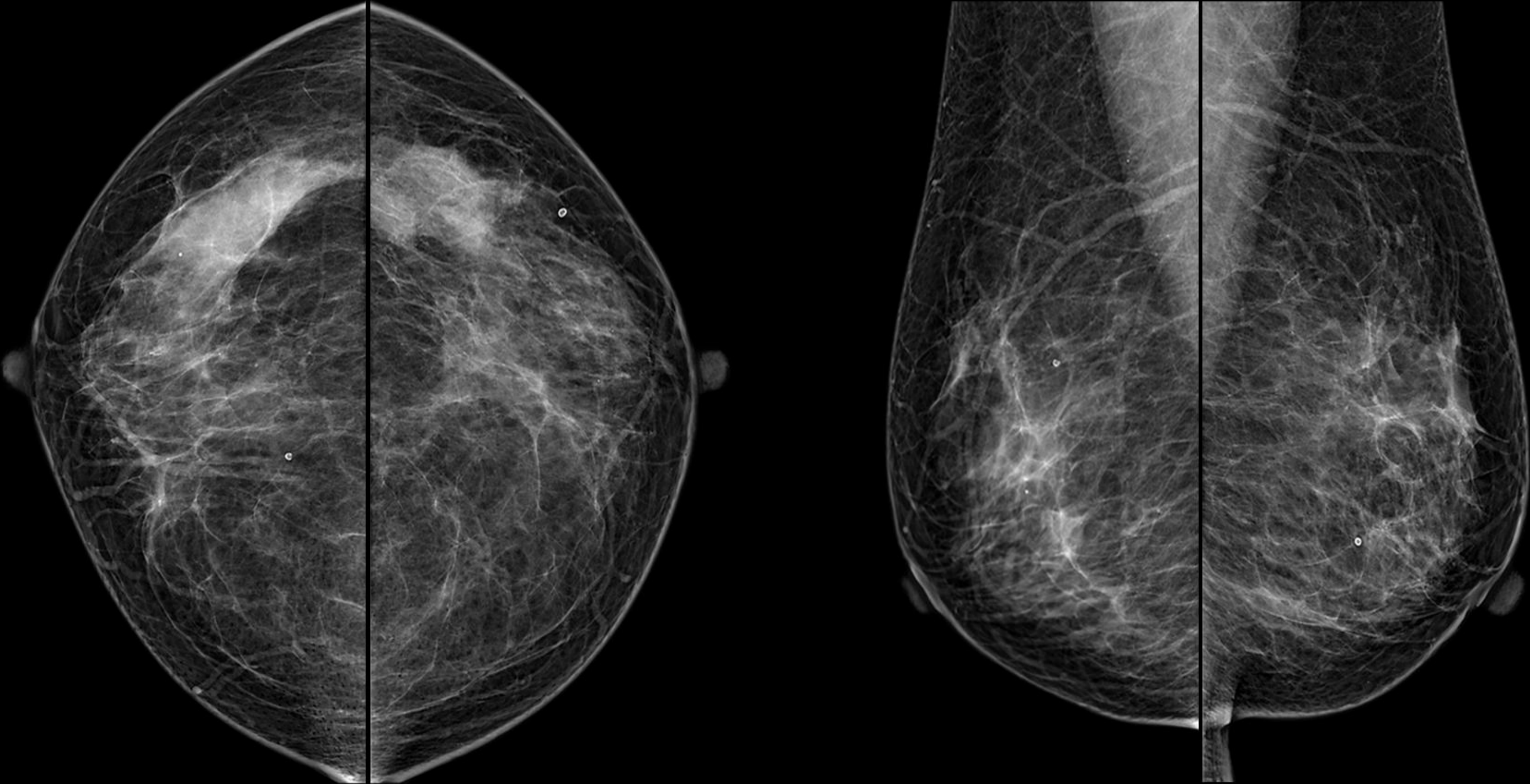
Given the dynamic emerging healthcare market, this acquisition is strategically significant as it will allow GE Healthcare to expand its mammography product range to the Value Mammography segment, estimated to be over \$200M. "This opportunity represents another very important step in the company's strategy of offering complete solutions that meet the needs of our global customers, while helping to provide more access to quality healthcare at a lower cost," said Hooman Hakami, President & CEO -- Detection & Guidance Solutions.

"At GE Healthcare we are very excited about the future of Women's Healthcare. With the mammography assets of Rayence, tailored for regions with specific cost and access needs, we add capability that allows us to bring affordable mammography solutions to new users and rural communities around the world, in particular physicians undertaking screening programs for breast cancer diagnosis. In addition, when combined with GE's core imaging capabilities, we will create a system that will

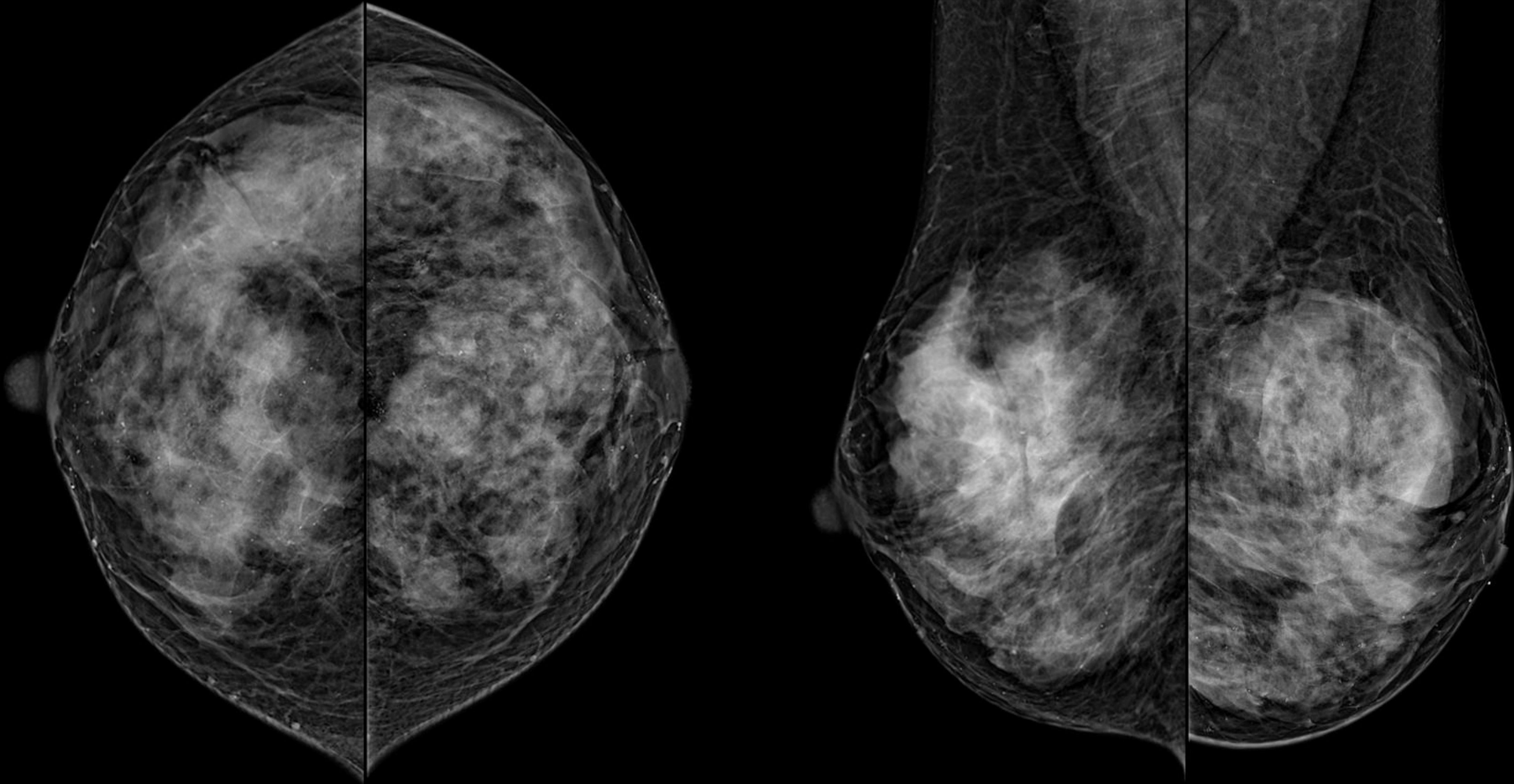
MAMMOGRAPHY SPECIFICATION

Model	1724SM	2434LM
		
Sensor Type	CMOS	
Scintillator	CsI : TI	CsI : TI
Active Area	231 x 171mm	342 x 231mm
Active Pixels	3,300 X 2,442 px	4,884 X 3,300 px
Pixel Pitch	70 μm	70 μm
Limiting Resolution	7.1 lp/mm	7.1 lp/mm
A/D Conversion	14 bits	14 bits
Data Acquisition Time	330ms	330ms
Frame Rate	~3fps	~3fps
Interface	Camera Link	Camera Link
Energy Range	~ 40kV	~ 40kV
Dimension [W x L x H]	280 x 238 x 35mm	383 x 338 x 35mm
Weight	3.4Kg [7.5lbs]	5.9Kg [1.3lbs]
Certification	N / A	N / A

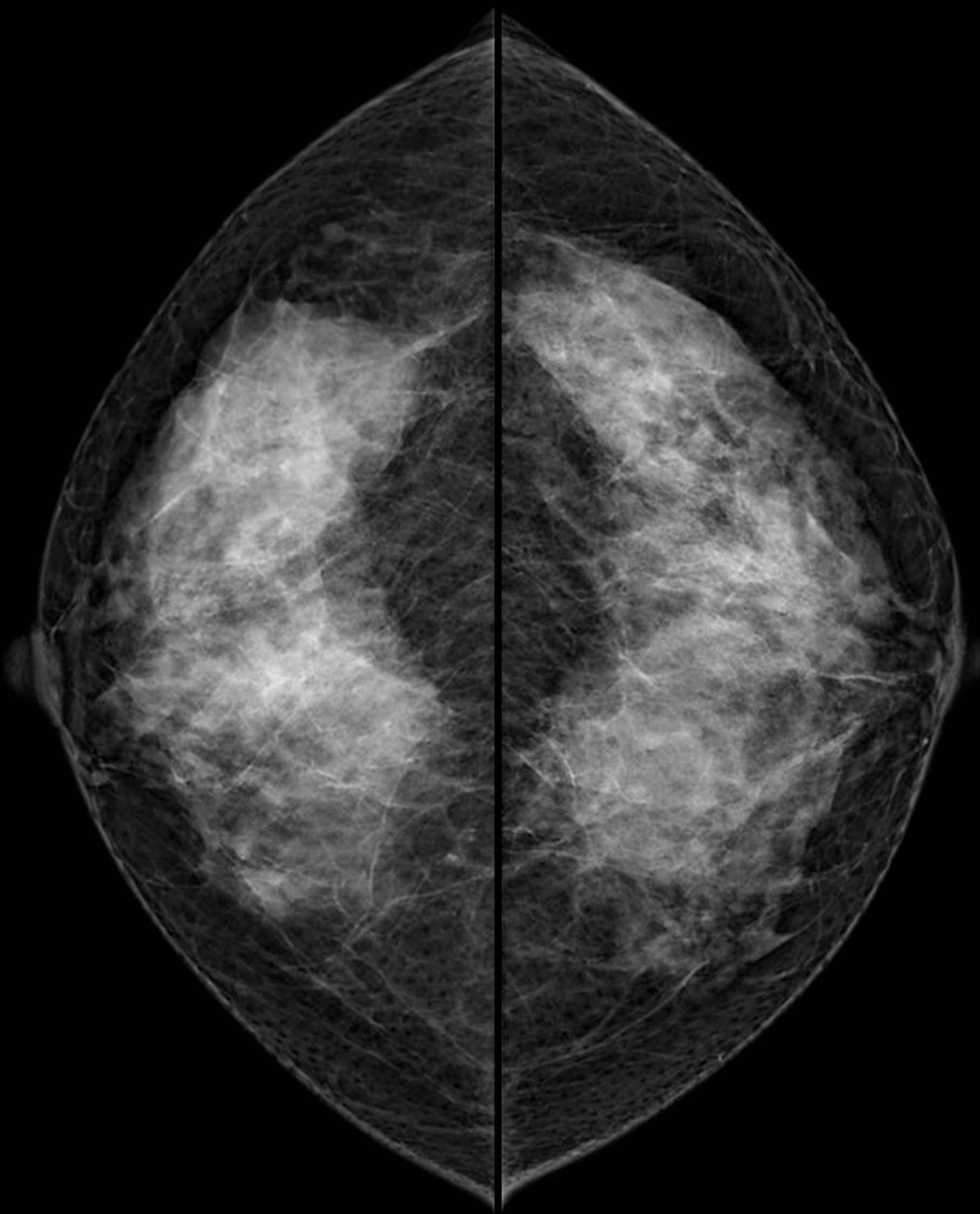
DIGITAL MAMMOGRAPHY **IMAGE**



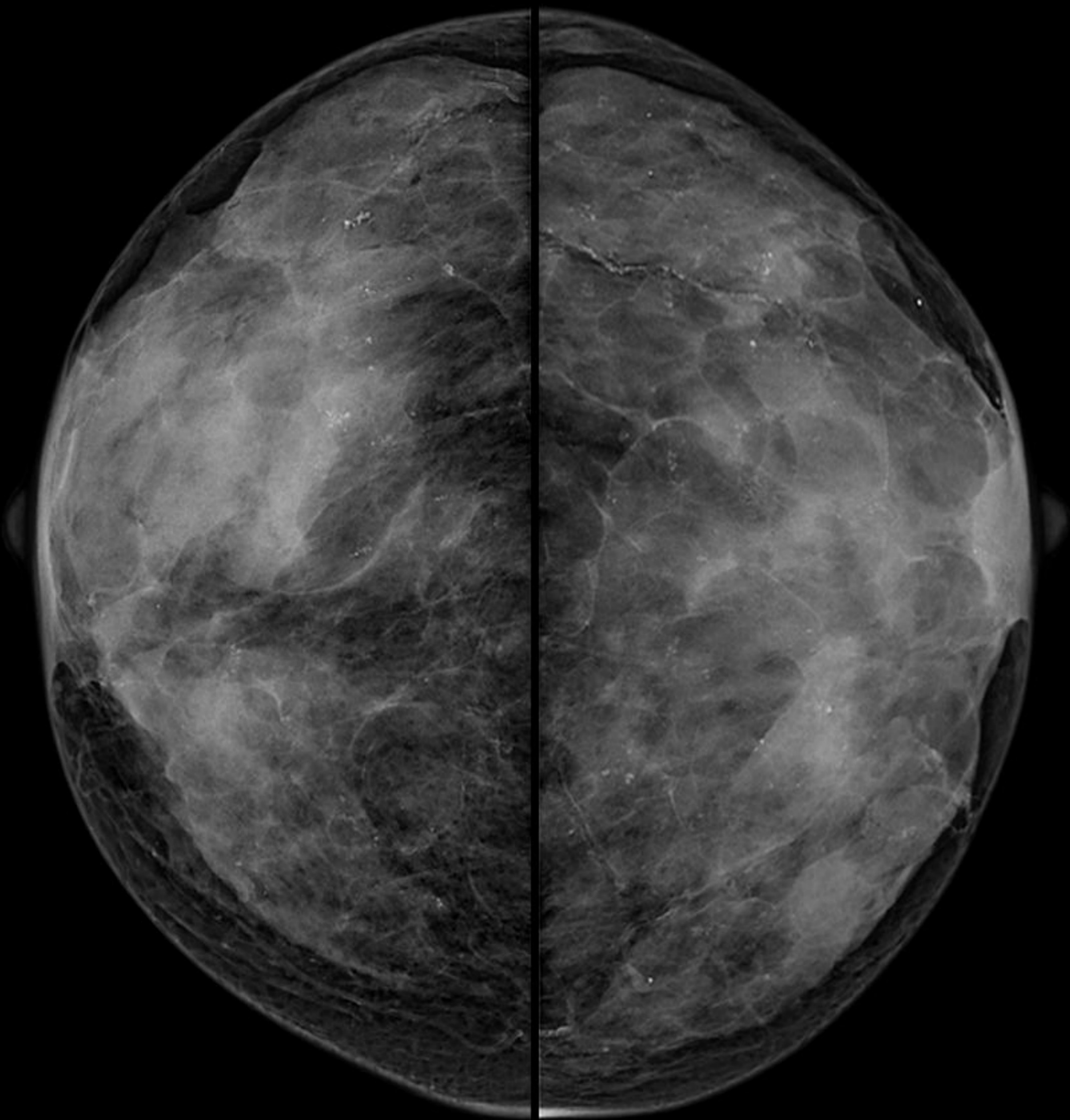
DIGITAL MAMMOGRAPHY **IMAGE**



DIGITAL MAMMOGRAPHY **IMAGE**



DIGITAL MAMMOGRAPHY **IMAGE**



CMOS Detectors

Surgical C-arm / In-vivo CT / CBCT

1215CF-MP / 1215MCB / 1919CF / 2430CF-MP

The premium choice for your Image

- Dynamic range [Max 90fps]
- Compact size
- Low patient dose
- High resolution [Csl Bonding option]
- Low noise and fast readout without an image lag



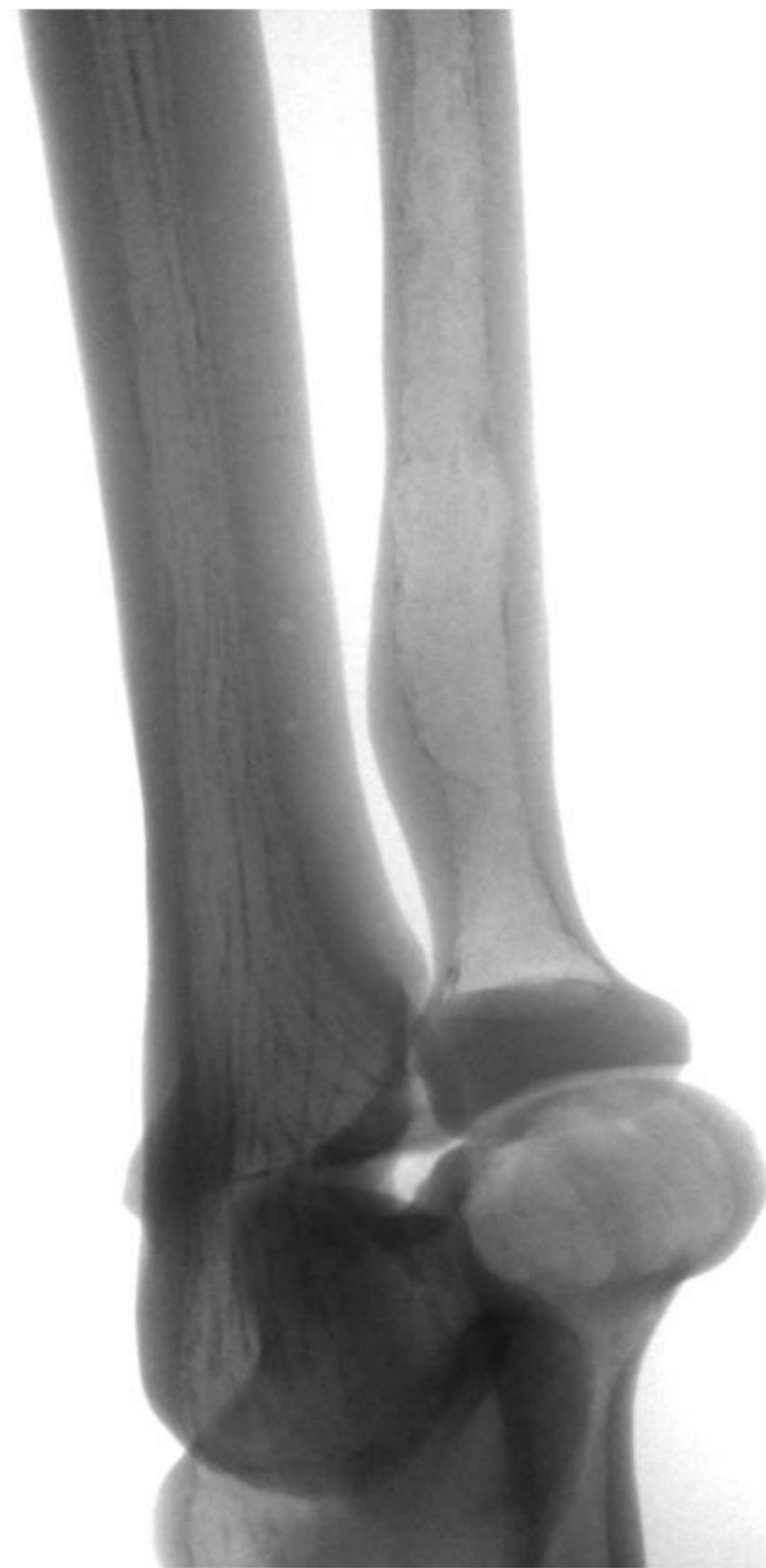
1724SM / 2434LM

1215CF-MP / 1215MCB / 1919CF / 2430CF-MP

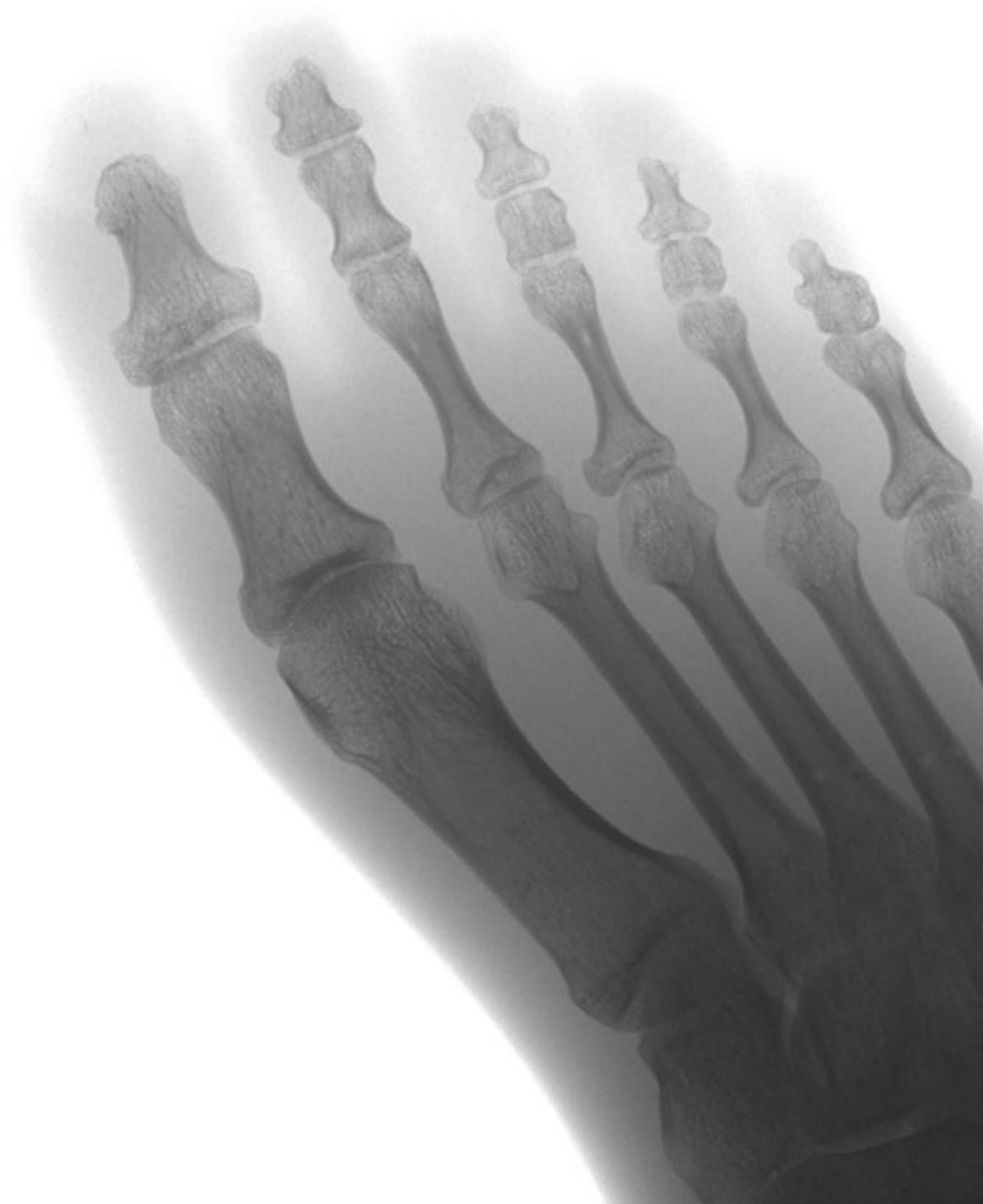
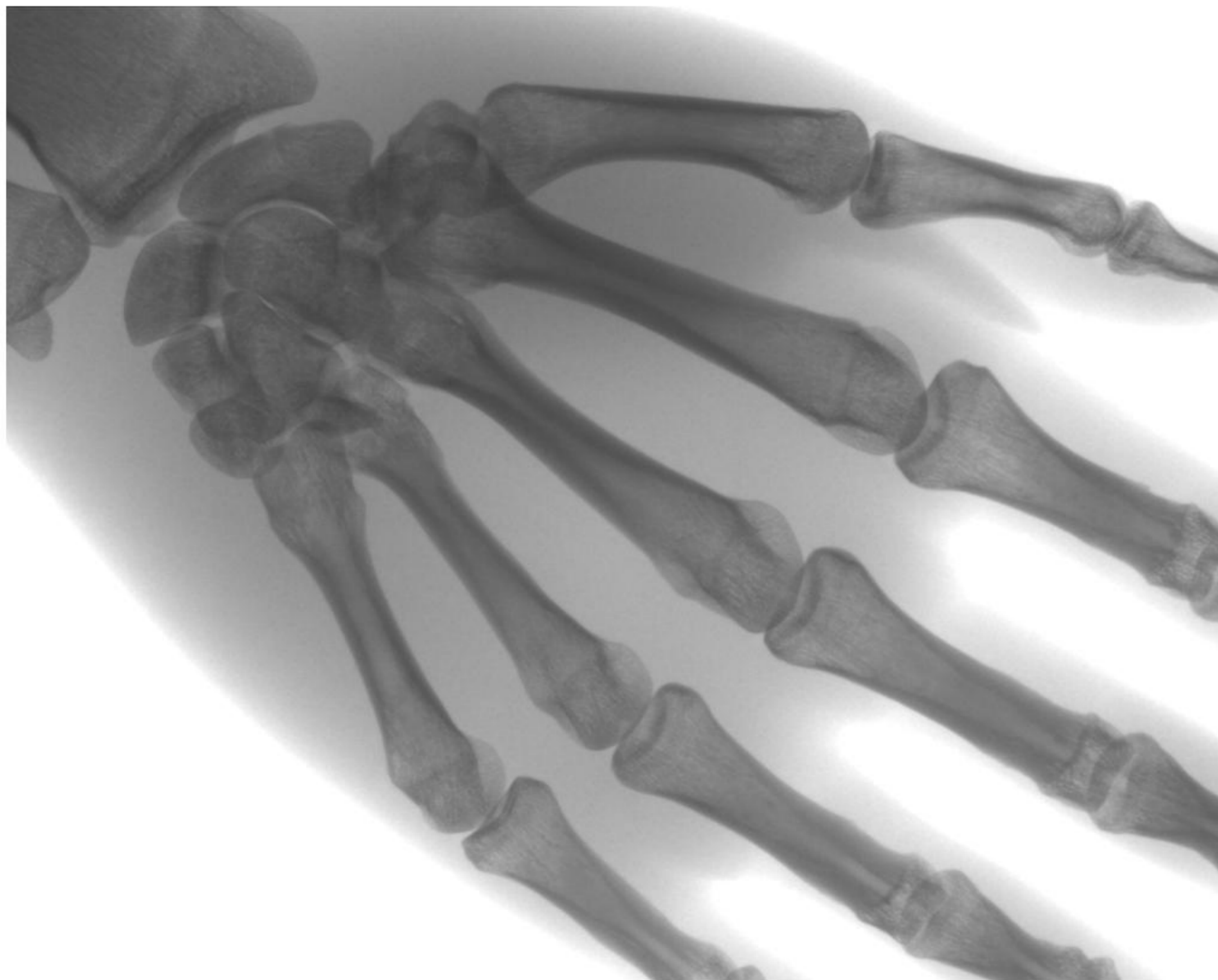
HDI-1000 / HDI-2000

0505CF / 0707CF / 1215MGF

SURGICAL C-ARM **IMAGE**



SURGICAL C-ARM **IMAGE**



CMOS Detectors

Intra Oral

HDI-1000 / HDI-2000

The premium choice for your Image

- Superior image on advanced CMOS technology
- Strict quality controlled product
- Assured cable durability by 25,000 times cable bending test
- Ergonomic rounded corner design
- Unique and flexible connector design



▲ HDI-2000

▲ HDI-1000

1724SM / 2434LM

1215CF-MP / 1215MCB / 1919CF / 2430CF-MP

HDI-1000 / HDI-2000

0505CF / 0707CF / 1215MGF

CMOS Detectors

Industrial 2D/3D inspection [Inline&Offline] / Industrial CT

0505CF / 0707CF / 1215MGF

Clear and fine image for industrial inspection

- Fine pixel size [$24\mu\text{m}$]
- Various sizes from 5cm x 5cm, 7cm x 7cm and 12cm x 15cm
- Robust design
- 14bits digital output
- Wafer-scale, large-area CMOS sensor
- Pixel binning up to 4 x 4
- Fast readout without data loss



▲ 0505CF



▲ 0707CF



▲ 1215MGF

1724SM / 2434LM

1215CF-MP / 1215MCB / 1919CF / 2430CF-MP

HDI-1000 / HDI-2000

0505CF / 0707CF / 1215MGF



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