

California URGENT CARE ASSOCIATION
2024 WESTERN REGIONAL
URGENT CARE CONFERENCE



Urgent Care Radiology

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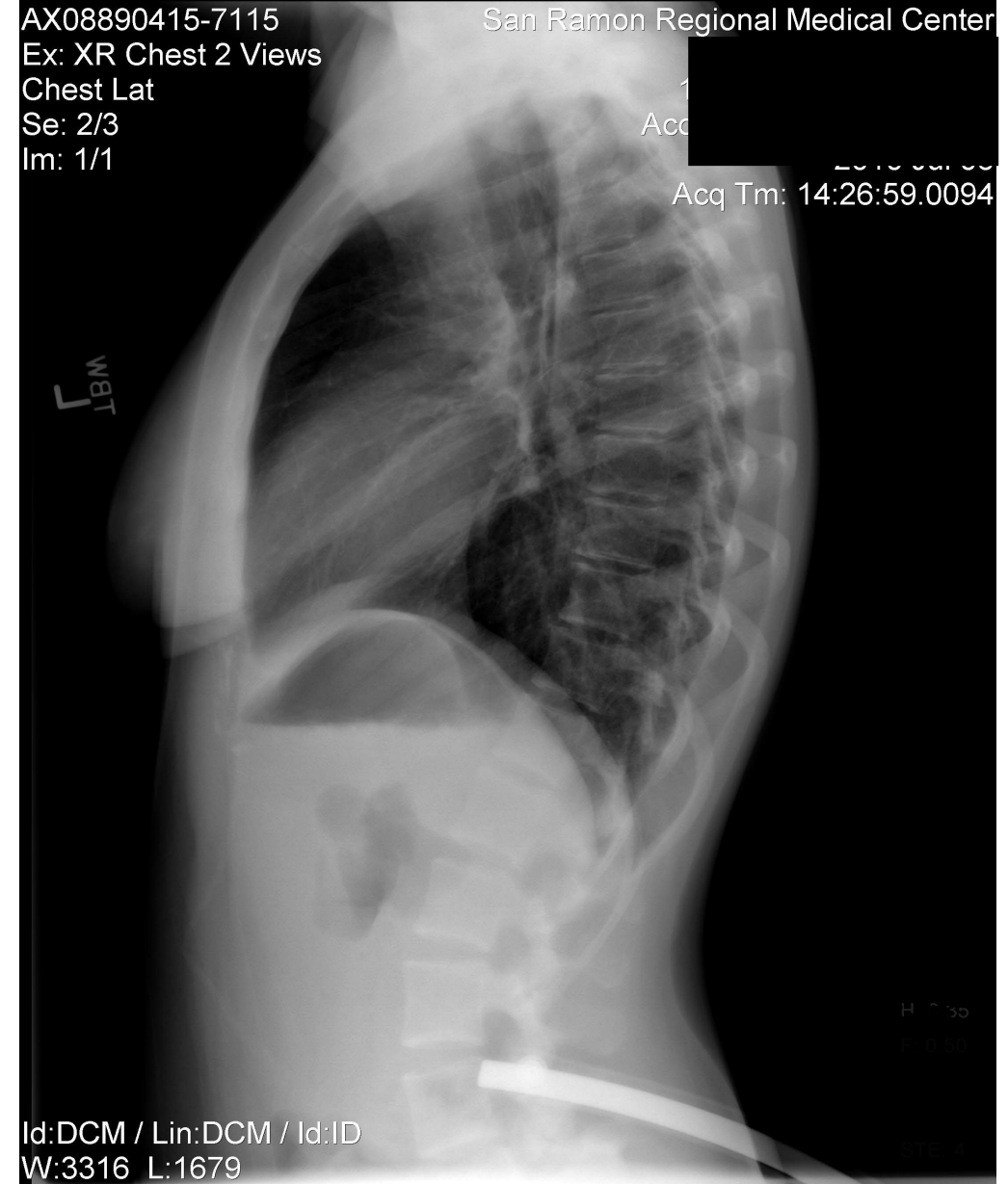
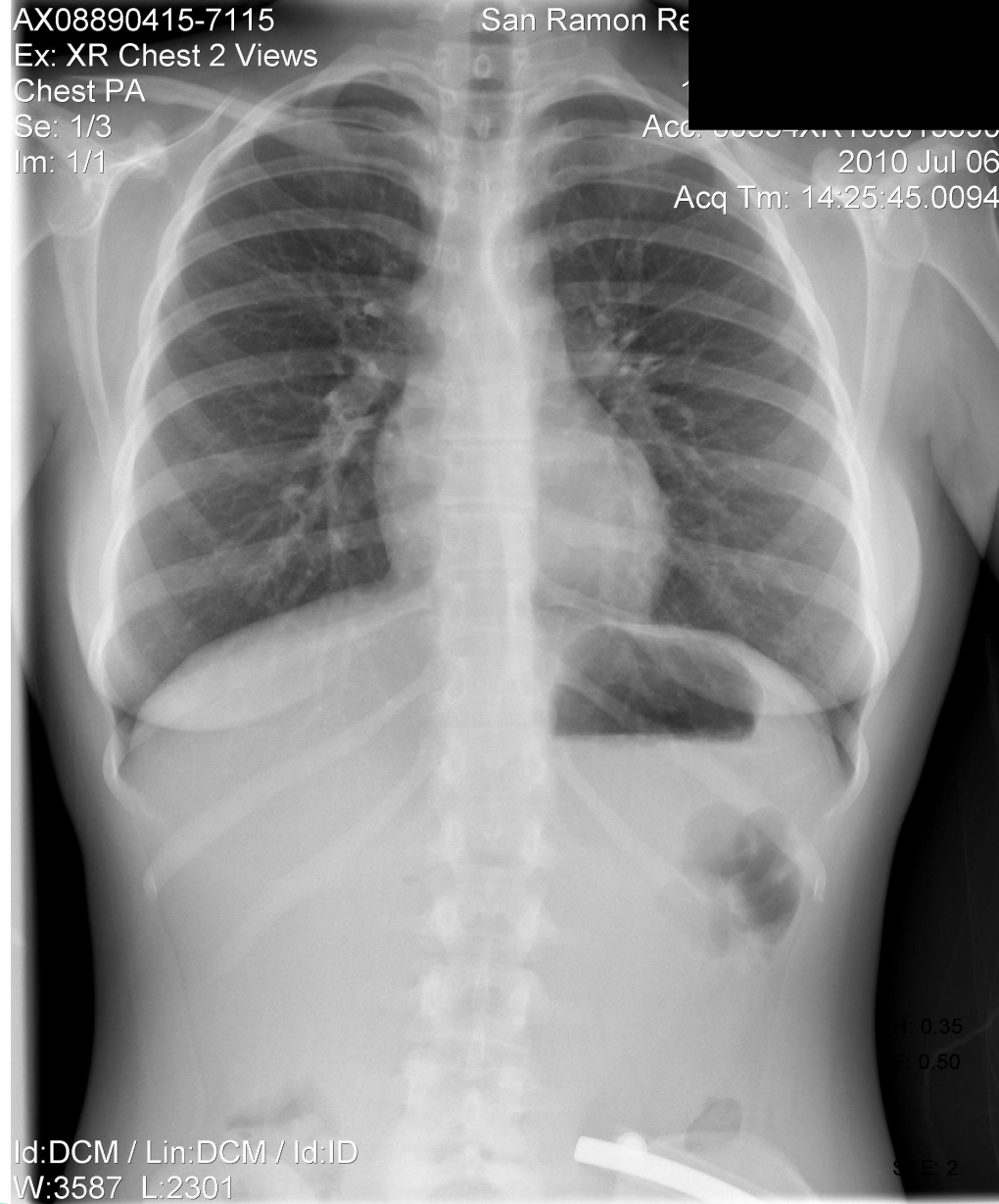
Disclosures

- No financial/commercial disclosures
- No off-label use

Objectives

- Review some higher-risk xray findings
- Understand strengths and weaknesses of plain radiography
- Discuss some pitfalls in xray interpretations
- Weave in some clinical decision-making

19 yo with 2 days of cough, fever,
tachypnea, O2 sat 95% on RA, scattered
rhonchi on lung exam



Normal CXR

Diagnosis: ?

Normal CXR

Diagnosis: bronchitis

Normal CXR

Diagnosis: bronchitis

Treatment?

Normal CXR

Diagnosis: bronchitis

Treatment – symptomatic care, no antibiotics

5 yo with 2 days of cough, fever,
tachypnea, O2 sat 92% on RA, rhonchi on
R lung exam

AX08890415-7115

San Ramon Re

Ex: XR Chest 2 Views

Chest PA

Se: 1/3

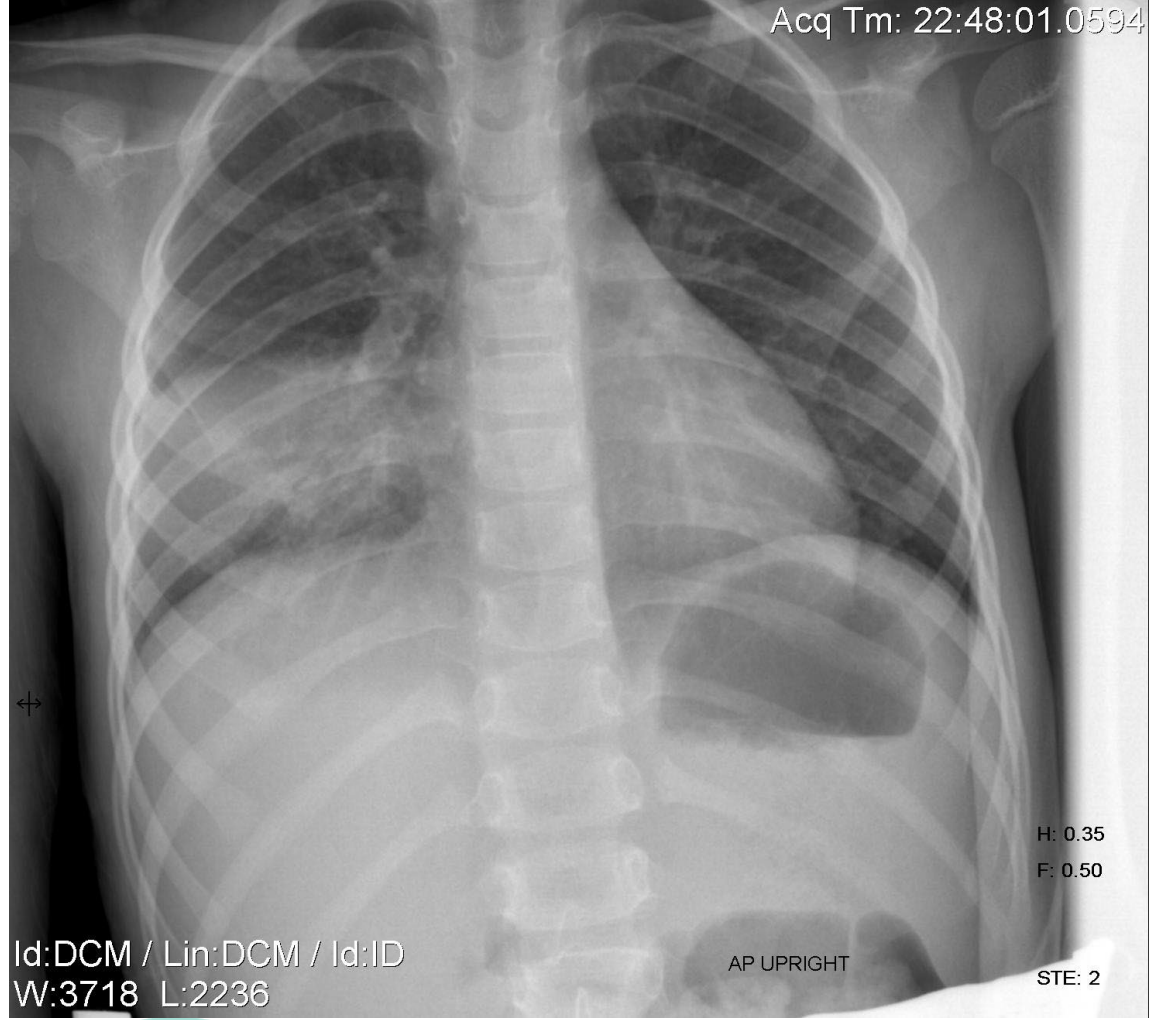
Im: 1/1

20

Acc:

2010 Feb 24

Acq Tm: 22:48:01.0594



AX08890415-7115

San Ramon R

Ex: XR Chest 2 Views

Chest Lat

Se: 2/3

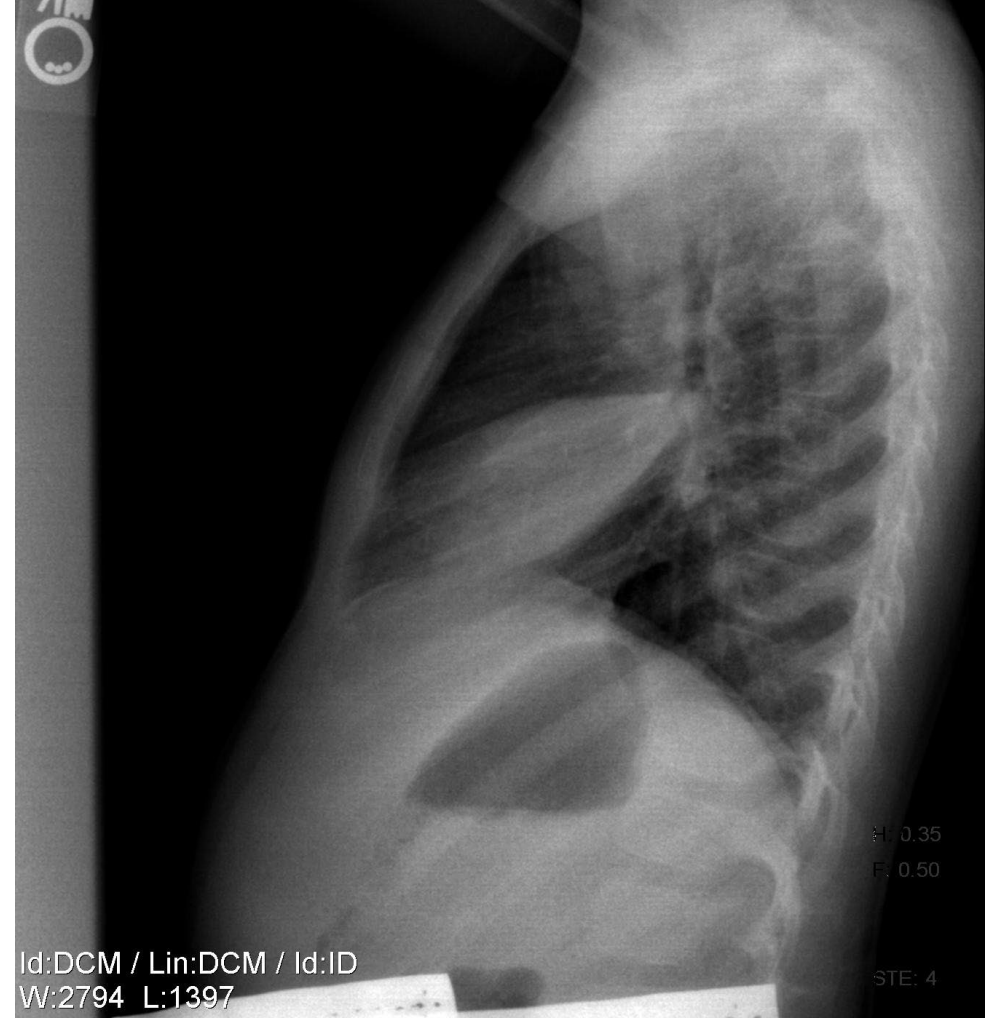
Im: 1/1

2

Ac

2010 Feb 24

Acq Tm: 22:49:17.0672

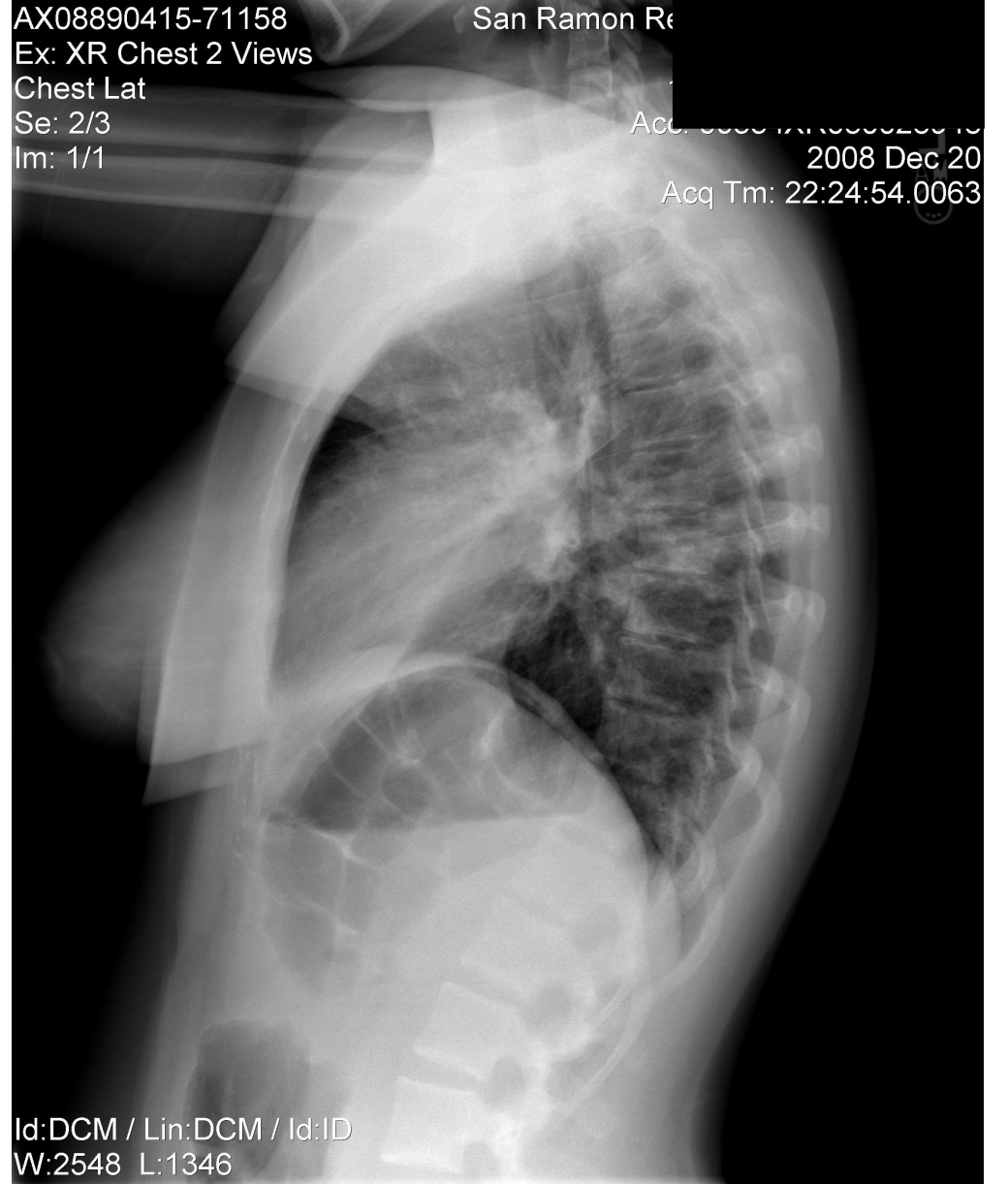
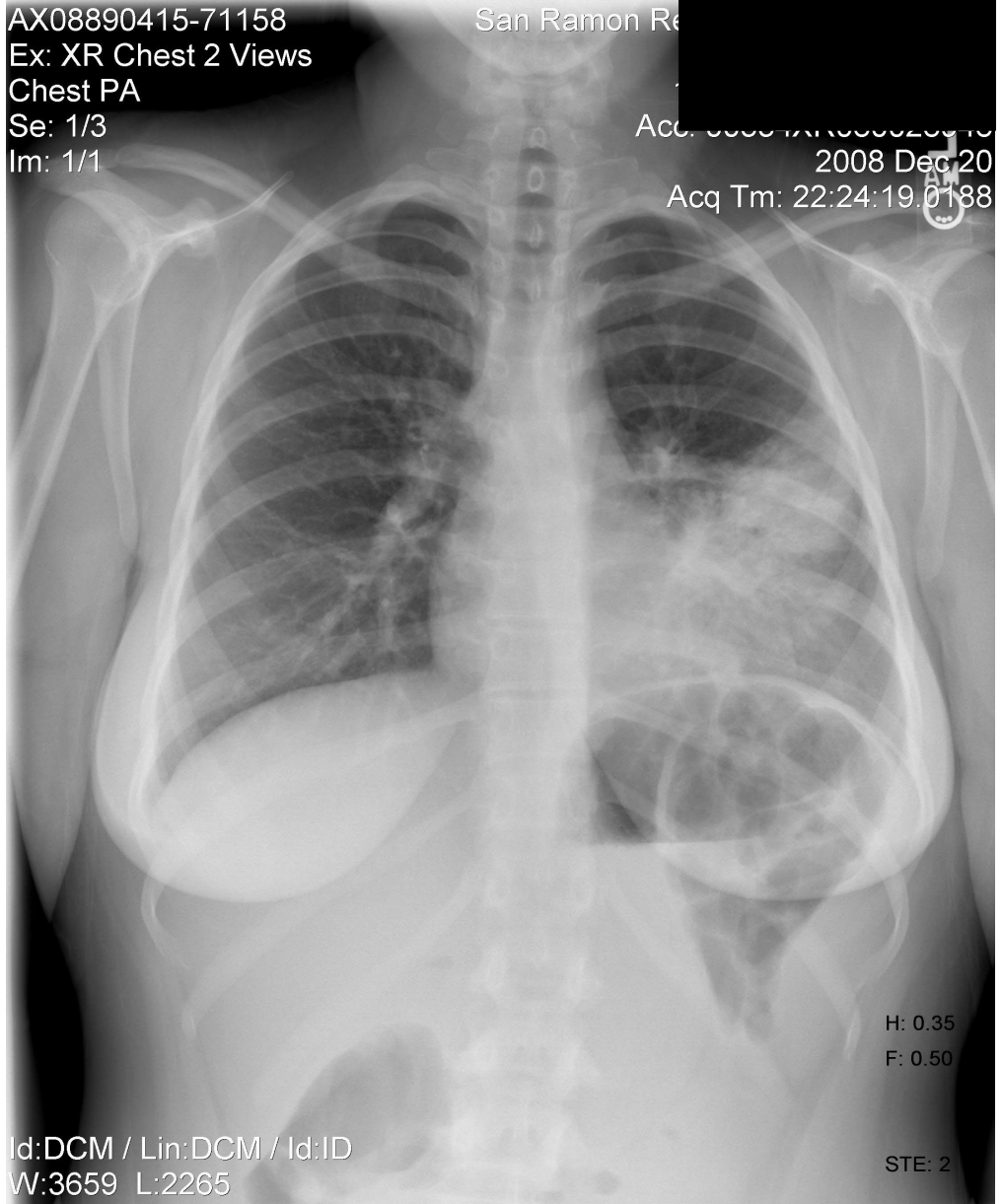


RML pneumonia

RML pneumonia

(**can** be diagnosed “clinically”, w/o CXR, in children)

23 yo with 2 weeks of cough, fever,
tachypnea, O2 sat 92% on RA, rhonchi on L
lung exam

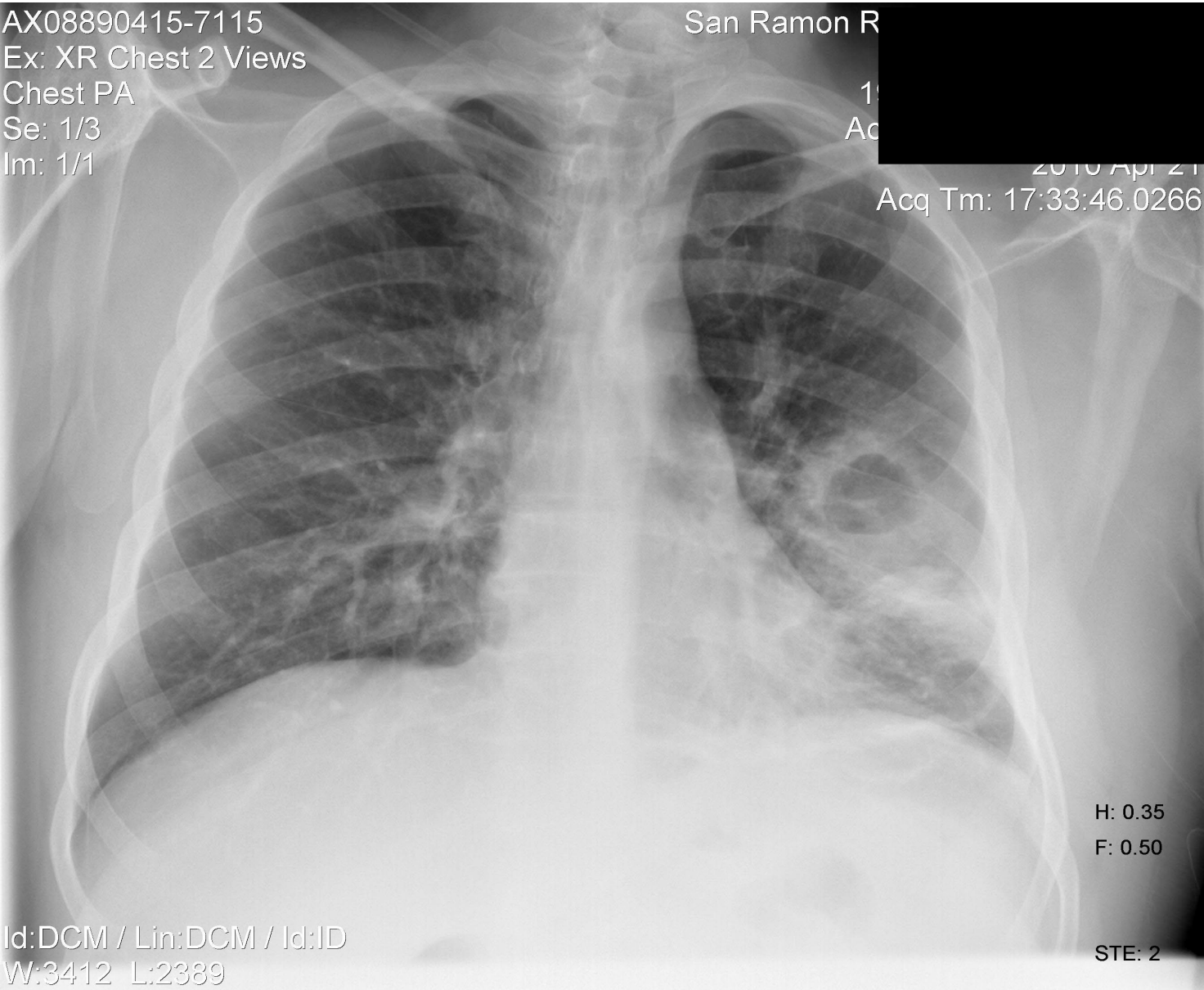


Lingular PNA

36 yo with 2 weeks of cough, fever,
tachypnea, O2 sat 92% on RA, rhonchi on L
lung exam

AX08890415-7115
Ex: XR Chest 2 Views
Chest PA
Se: 1/3
Im: 1/1

San Ramon R
1
Ac
2010 Apr 21
Acq Tm: 17:33:46.0266

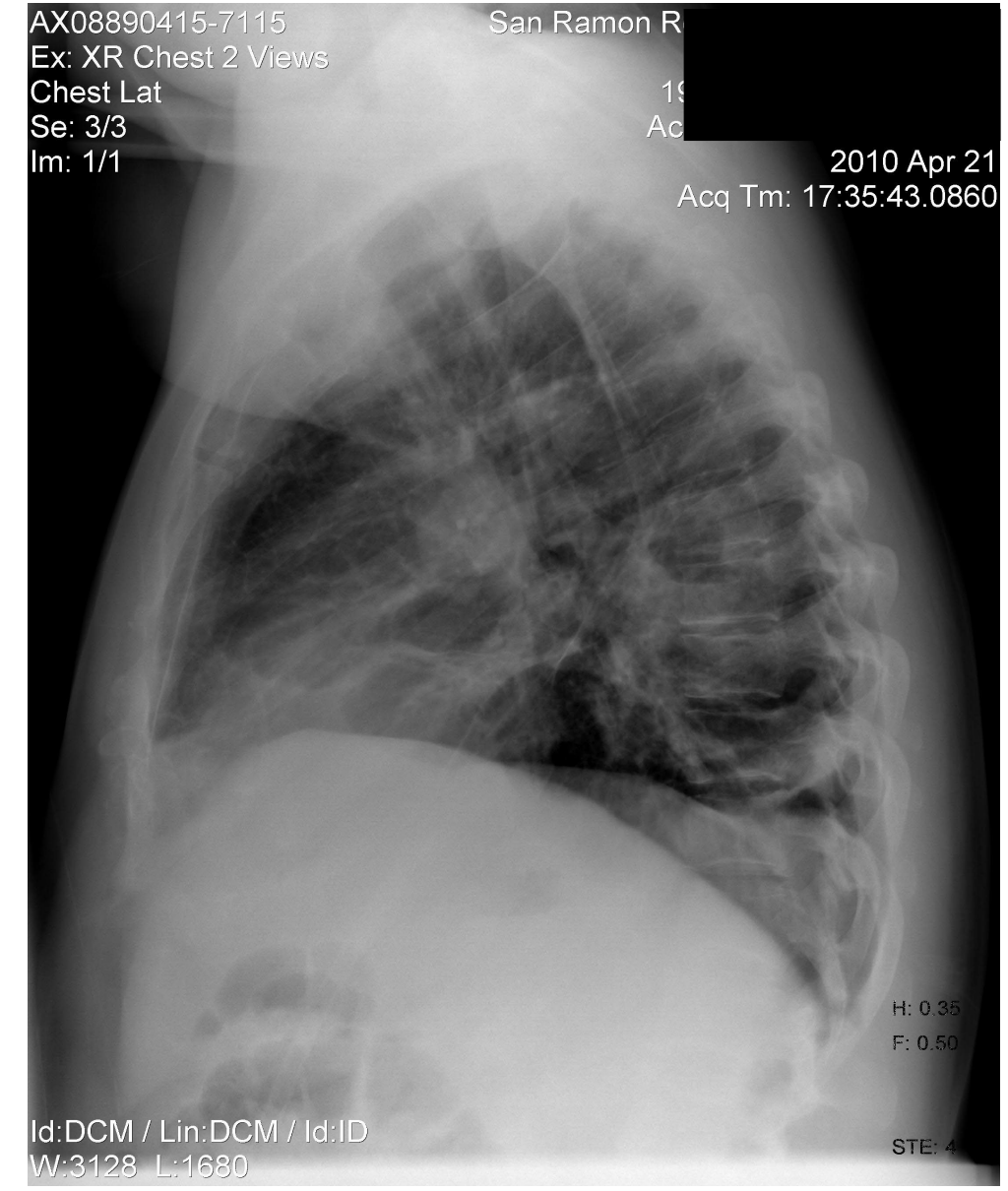


H: 0.35
F: 0.50
STE: 2

Id:DCM / Lin:DCM / Id:ID
W:3412 L:2389

AX08890415-7115
Ex: XR Chest 2 Views
Chest Lat
Se: 3/3
Im: 1/1

San Ramon R
19
Ac
2010 Apr 21
Acq Tm: 17:35:43.0860



H: 0.35
F: 0.50
STE: 4

Id:DCM / Lin:DCM / Id:ID
W:3128 L:1680

Cavitary L pneumonia – Ddx – TB or other
Mycobacterium, fungal, cancer

Cavitary L pneumonia – Ddx – TB or other
Mycobacterium sp, fungal, cancer

Due to TB concerns, start immediate airborne
precautions

925275XR650

Ex: 659786

Chest

Se: 4296/1

Im: 1/2

Lat: U

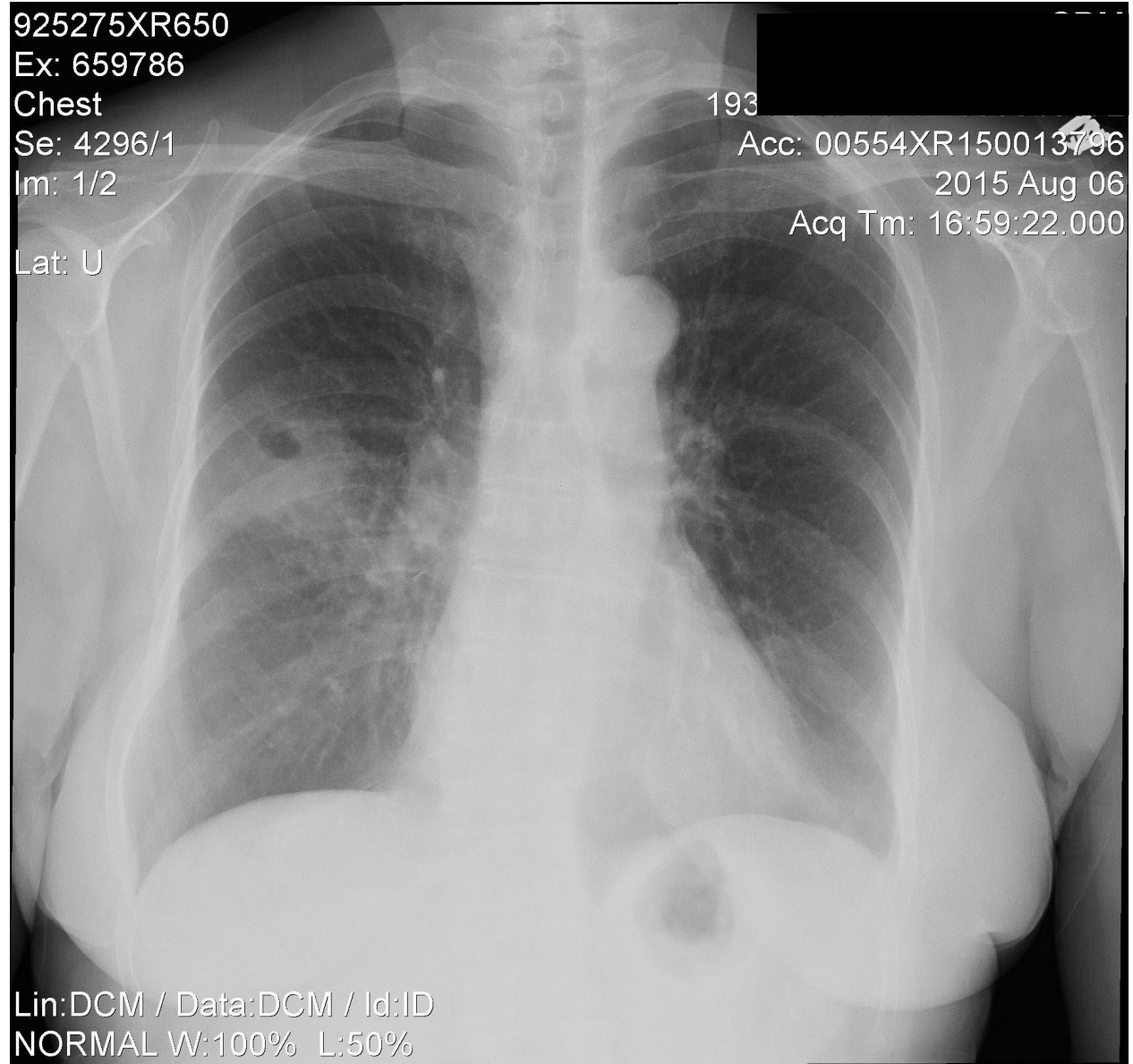
193

Acc: 00554XR150013796

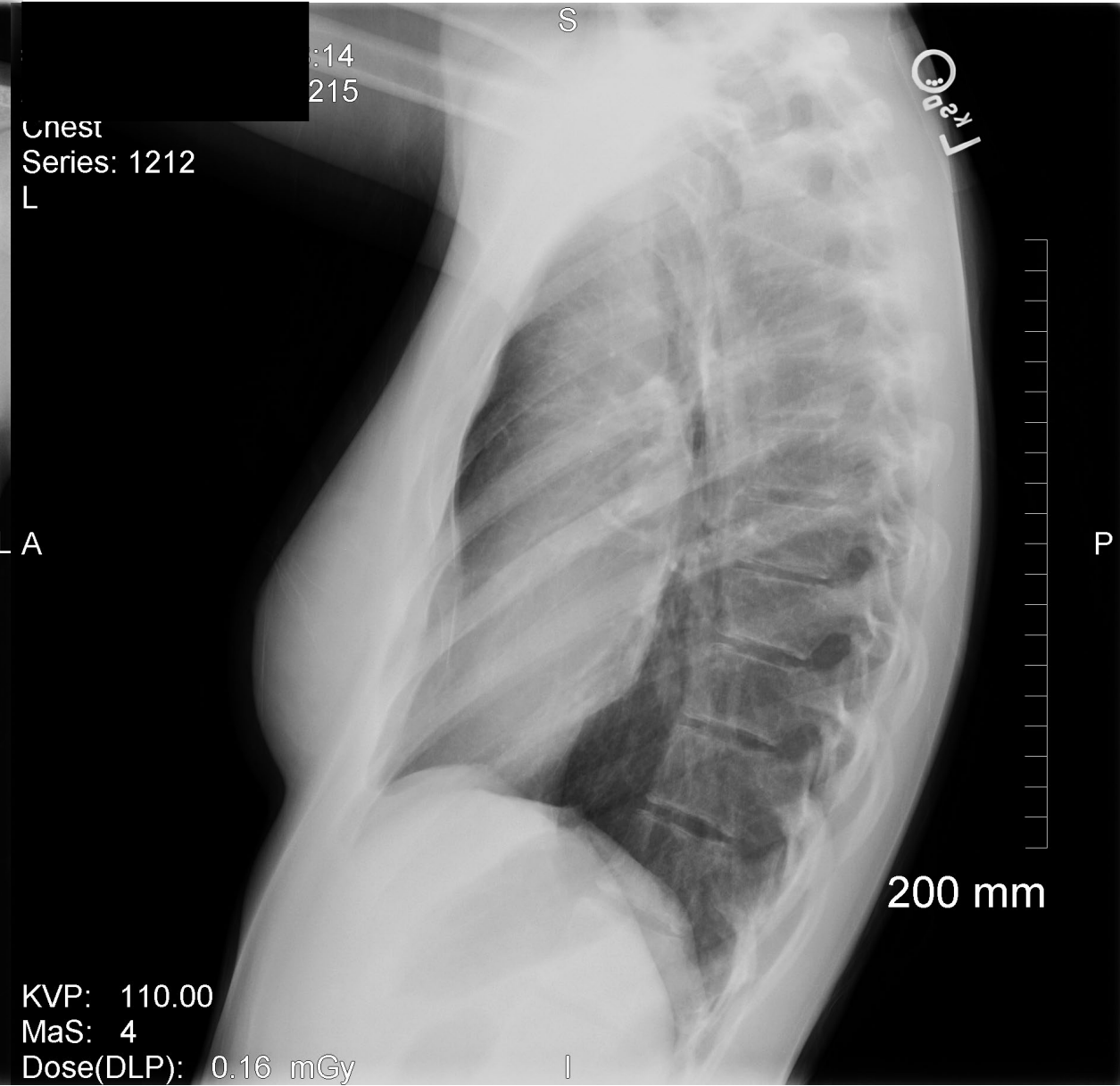
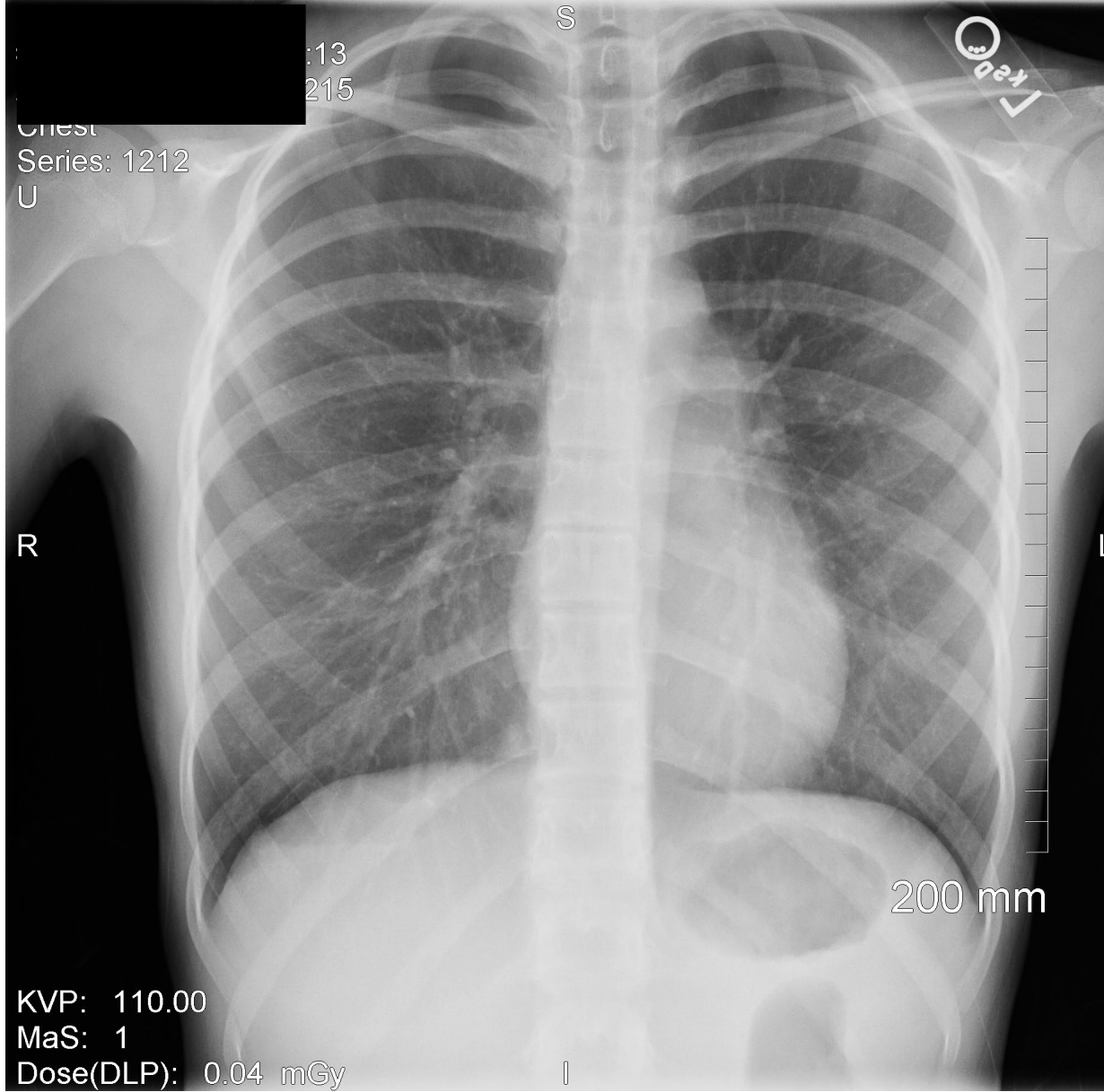
2015 Aug 06

Acq Tm: 16:59:22.000

Lin:DCM / Data:DCM / Id:ID
NORMAL W:100% L:50%



16 yo with sharp R sided CP for several hours, worse with breathing



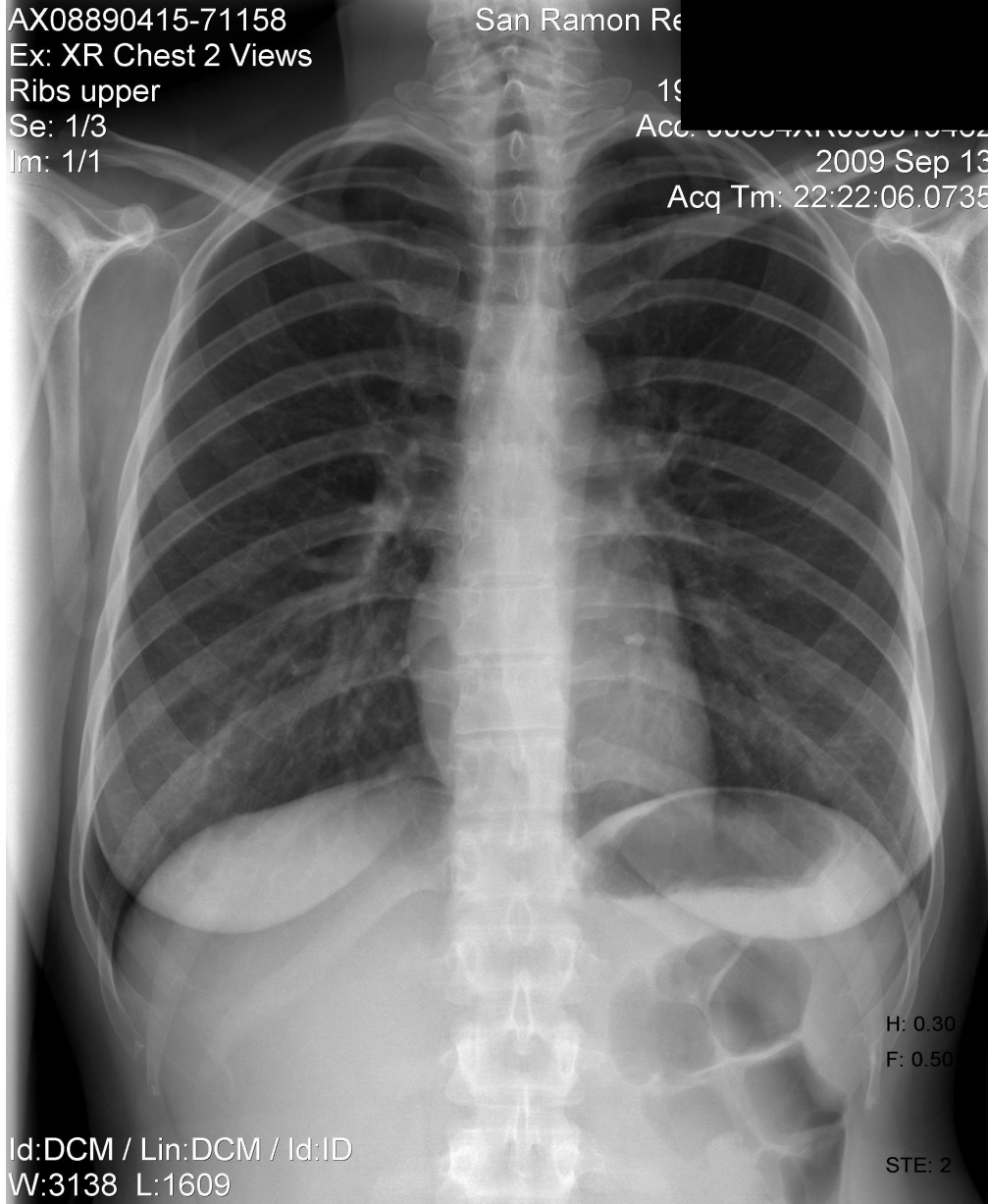
R pneumothorax

33 yo with sharp L sided CP for several hours, worse with breathing

AX08890415-71158
Ex: XR Chest 2 Views
Ribs upper
Se: 1/3
Im: 1/1

San Ramon Re

19
Acc: 0000471000019402
2009 Sep 13
Acq Tm: 22:22:06.0735



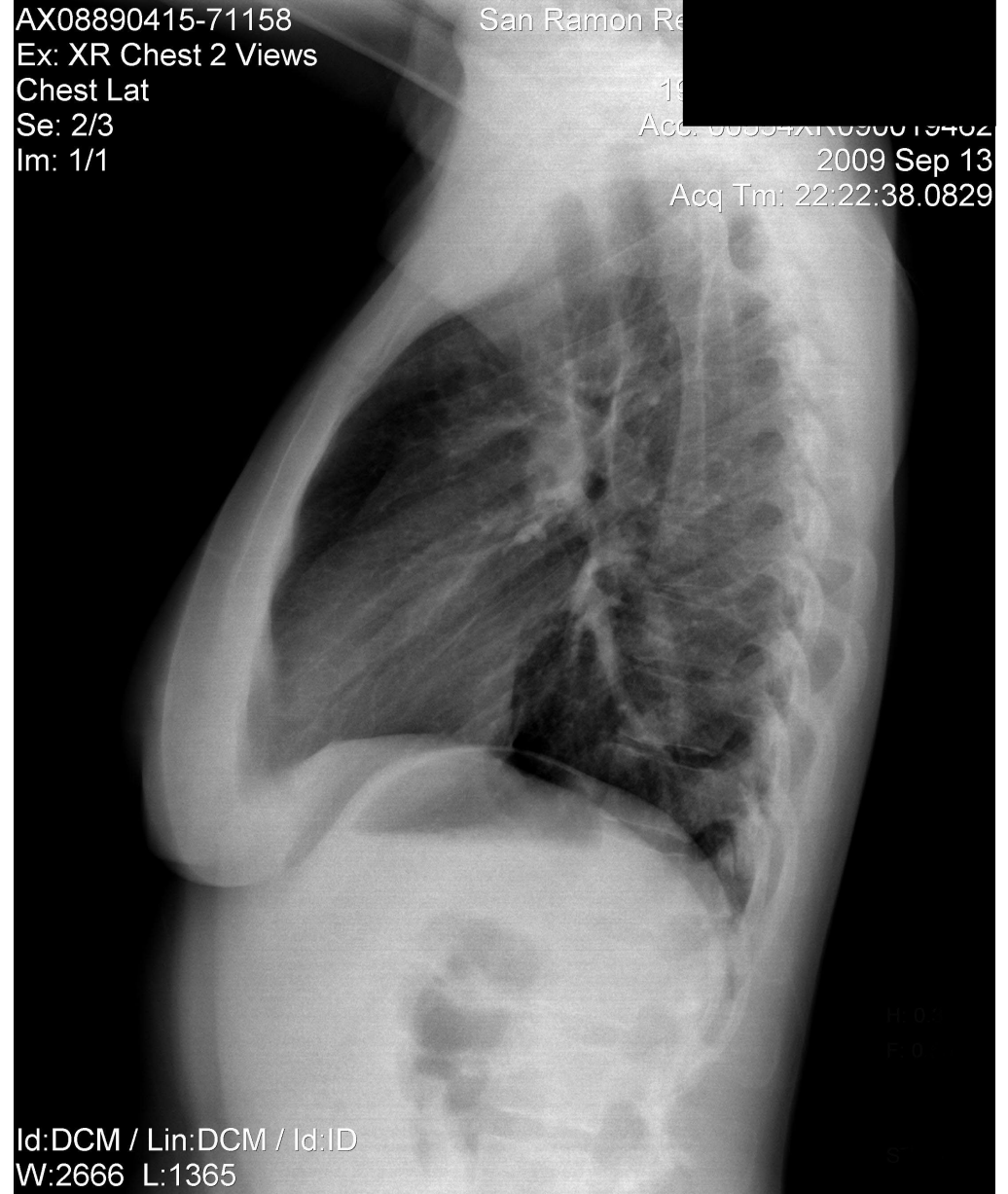
Id:DCM / Lin:DCM / Id:ID
W:3138 L:1609

STE: 2

AX08890415-71158
Ex: XR Chest 2 Views
Chest Lat
Se: 2/3
Im: 1/1

San Ramon Re

19
Acc: 0000471000019402
2009 Sep 13
Acq Tm: 22:22:38.0829



Id:DCM / Lin:DCM / Id:ID
W:2666 L:1365

Normal CXR

Normal CXR

Clinical PERC rule is negative...Dx?

Normal CXR

Clinical PERC rule is negative...Dx?

Pleuritic CP/Pleurisy



Wells' Criteria for Pulmonary Embolism

Objectifies risk of pulmonary embolism.

When to Use ▾

Pearls/Pitfalls ▾

Why Use ▾

Clinical signs and symptoms of DVT

No 0

Yes +3

PE is #1 diagnosis OR equally likely

No 0

Yes +3

Heart rate > 100

No 0

Yes +1.5

Immobilization at least 3 days OR surgery in the previous 4 weeks

No 0

Yes +1.5

Previous, objectively diagnosed PE or DVT

No 0

Yes +1.5

Hemoptysis

No 0

Yes +1

Malignancy w/ treatment within 6 months or palliative

No 0

Yes +1



Age \geq 50

No 0

Yes +1

HR \geq 100

No 0

Yes +1

O₂ sat on room air <95%

No 0

Yes +1

Unilateral leg swelling

No 0

Yes +1

Hemoptysis

No 0

Yes +1

Recent surgery or trauma

Surgery or trauma \leq 4 weeks ago requiring treatment with general anesthesia

No 0

Yes +1

Prior PE or DVT

No 0

Yes +1

Hormone use

Oral contraceptives, hormone replacement or estrogenic hormones use in males or female patients

No 0

Yes +1

20 yo with sharp L sided chest and back
pain for several hours, worse with
breathing

AX08890415-7115

Ex: 450258

Chest PA

Se: 1/2

Im: 1/1

19

Acc: 00554XR120010601

2012 Jun 08

Acq Tm: 15:48:03.0313

Id:DCM / Lin:DCM / Id:ID
W:3590 L:2300

STE. 2

AX08890415-7115

Ex: 450258

Chest Lat

Se: 2/2

Im: 1/1

1995 Jul

Acc: 00

2012 Jun 08

Acq Tm: 15:48:57.0110

Id:DCM / Lin:DCM / Id:ID
W:3204 L:1602

H: 0.3

F: 0.5

STE

L pneumothorax

42 yo with sharp L sided chest and back
pain for several hours, worse with
breathing

DR: [REDACTED]
UPRIGHT

Ex:

AP

Se: 1/1

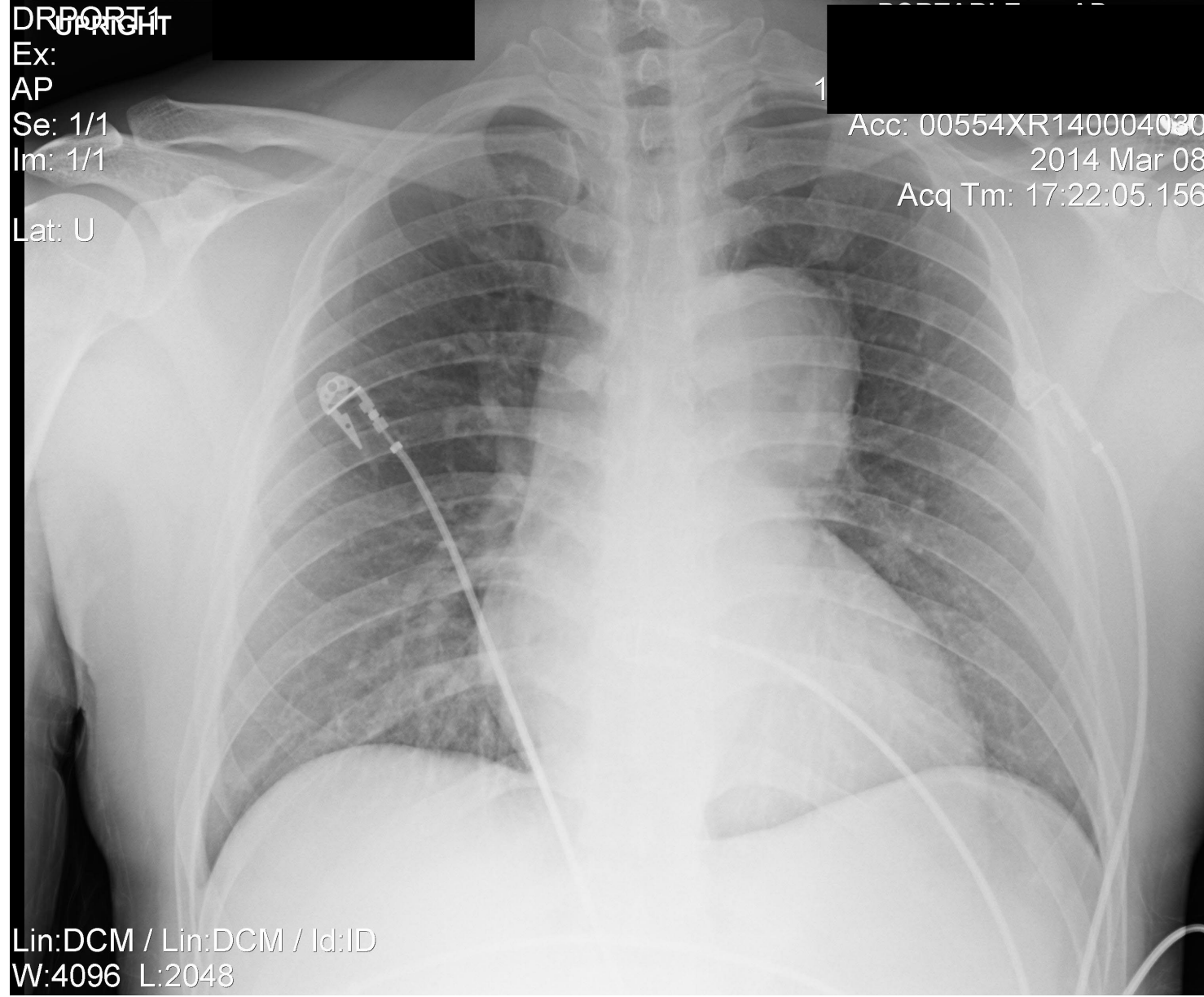
Im: 1/1

Lat: U

Acc: 00554XR140004030

2014 Mar 08

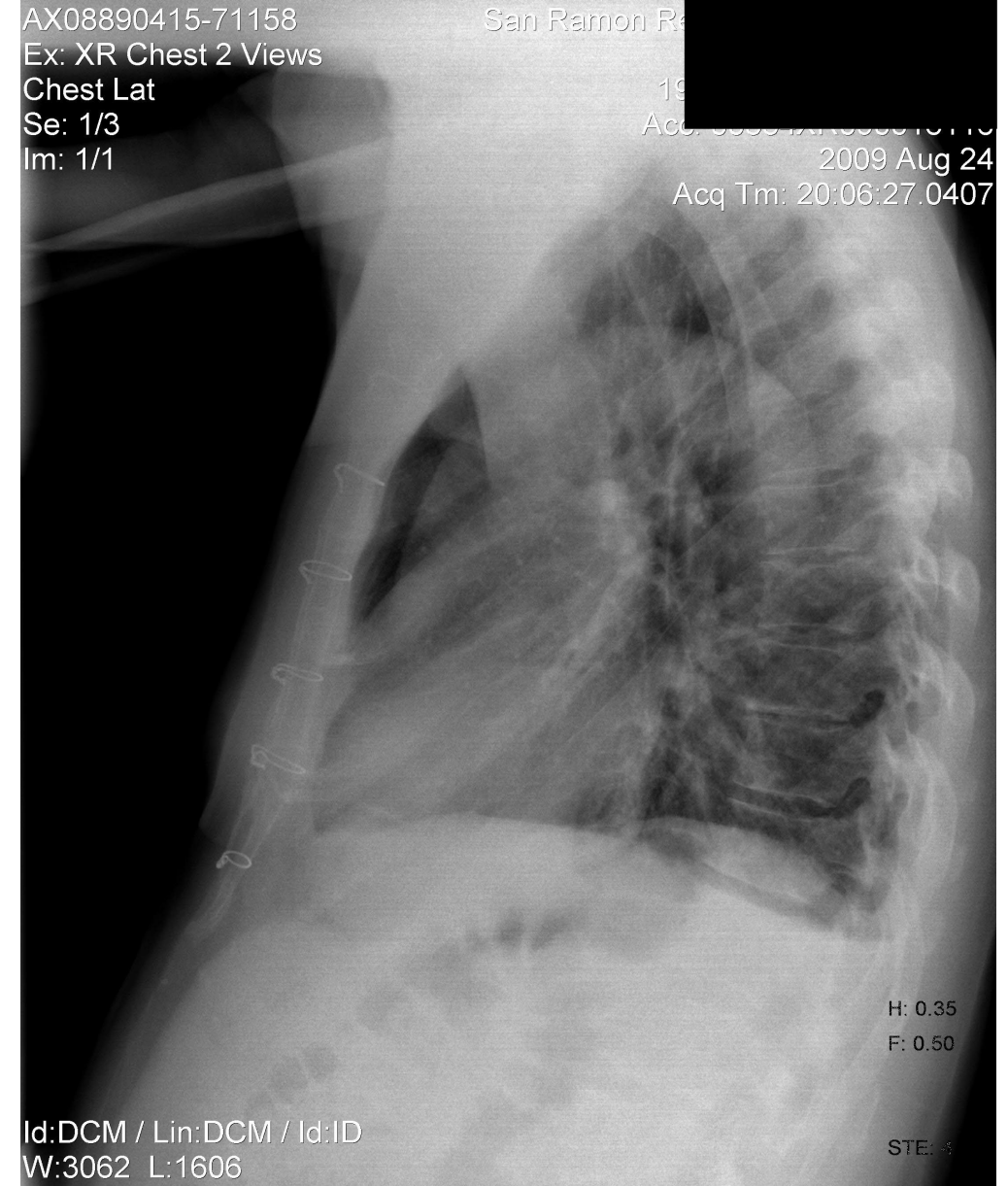
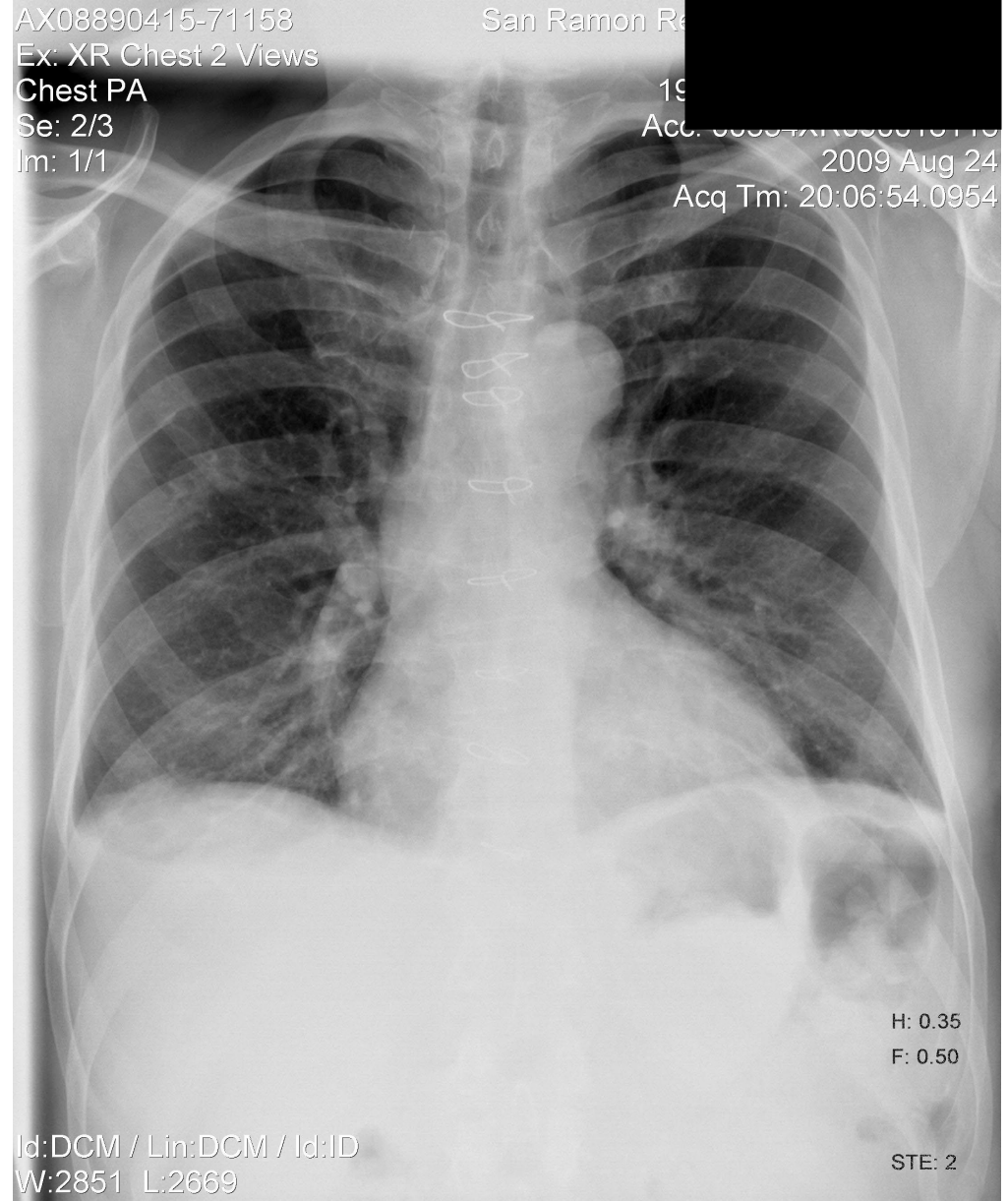
Acq Tm: 17:22:05.156



Lin:DCM / Lin:DCM / Id:ID
W:4096 L:2048

High degree of concern for thoracic aortic
dissection (was + on CTA)

70 yo with sharp R sided CP for several hours after falling in the shower



Posterior R rib fractures and (more importantly).....

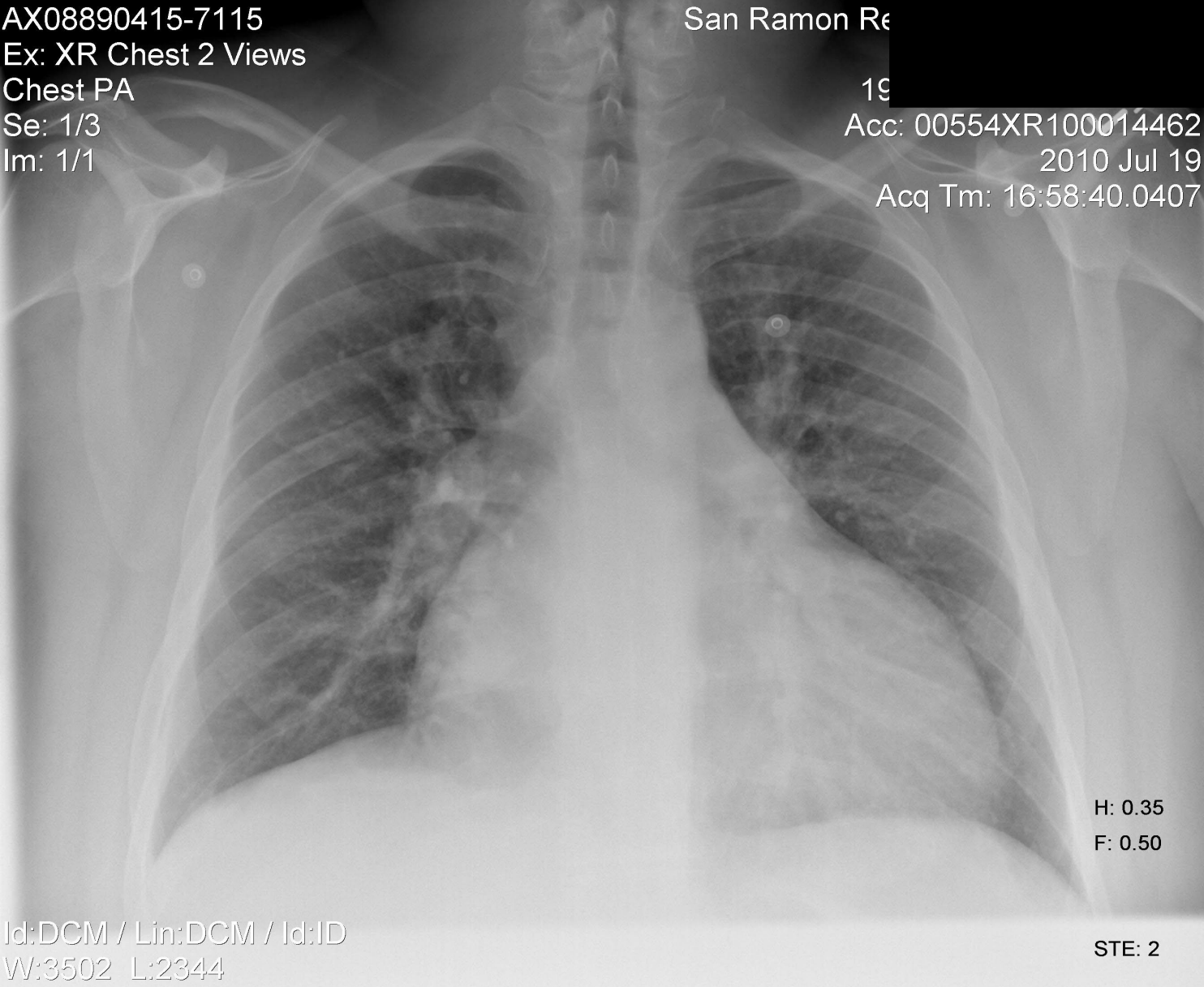
Posterior R rib fractures and (more importantly).....

no PTX or pulmonary complication

42 yo with several weeks of increasing SOB with exertion, a few weeks after recovering from some RTI sxs; RA O2 sat 92%, basilar crackles on lung exam

AX08890415-7115
Ex: XR Chest 2 Views
Chest PA
Se: 1/3
Im: 1/1

San Ramon Re
19
Acc: 00554XR100014462
2010 Jul 19
Acq Tm: 16:58:40.0407



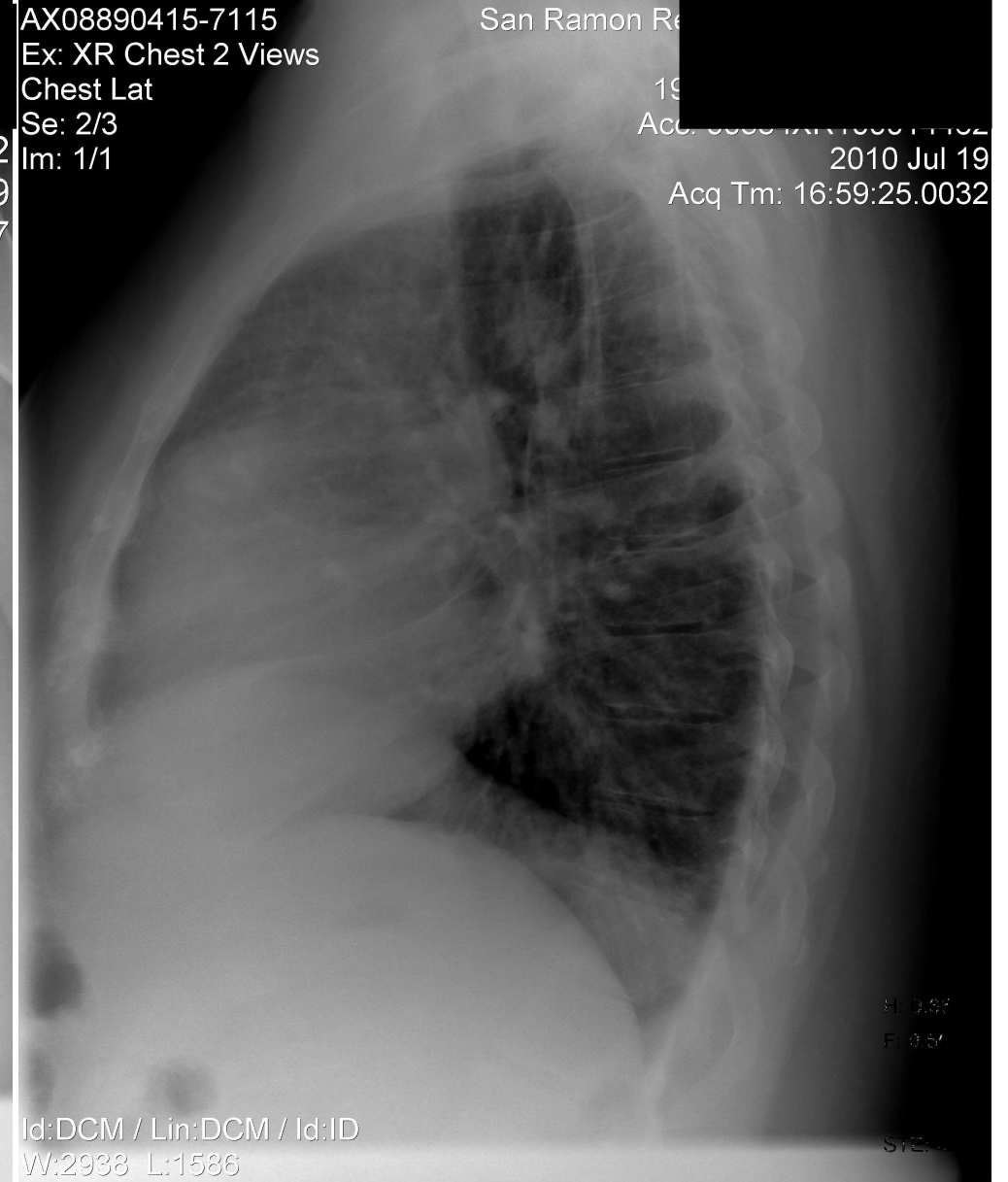
H: 0.35
F: 0.50

Id:DCM / Lin:DCM / Id:ID
W:3502 L:2344

STE: 2

AX08890415-7115
Ex: XR Chest 2 Views
Chest Lat
Se: 2/3
Im: 1/1

San Ramon Re
19
Acc: 00554XR100014462
2010 Jul 19
Acq Tm: 16:59:25.0032



H: 0.35
F: 0.50

Id:DCM / Lin:DCM / Id:ID
W:2938 L:1586

STE: 2

What do you see?

Enlarged cardiac silhouette

Increased pulmonary vasculature

Pulmonary edema

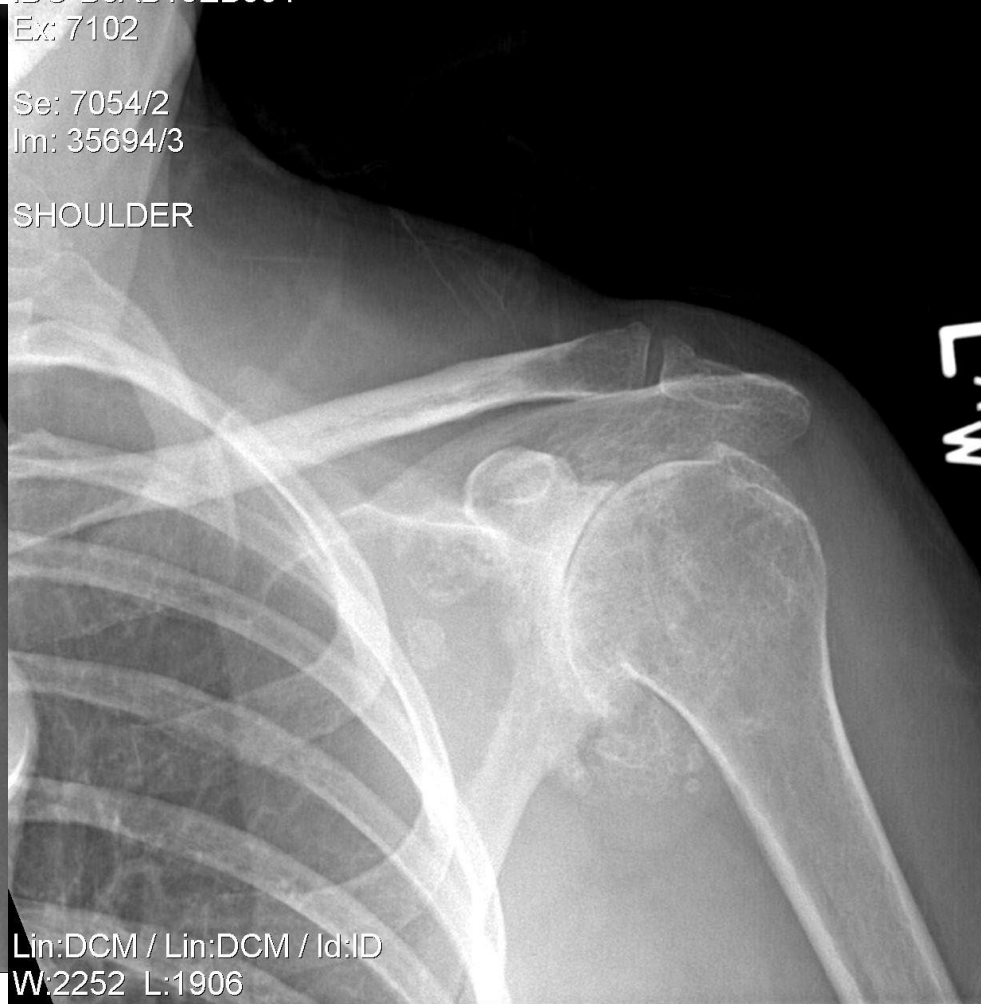
Enlarged cardiac silhouette
Increased pulmonary vasculature
Pulmonary edema

Eventual diagnosis – new onset dilated
cardiomyopathy and CHF

77 yo with several weeks of severe left shoulder pain and decreased ROM after no specific trauma, exam shows painful, decreased ROM and no specific TTP



1 / Id:ID



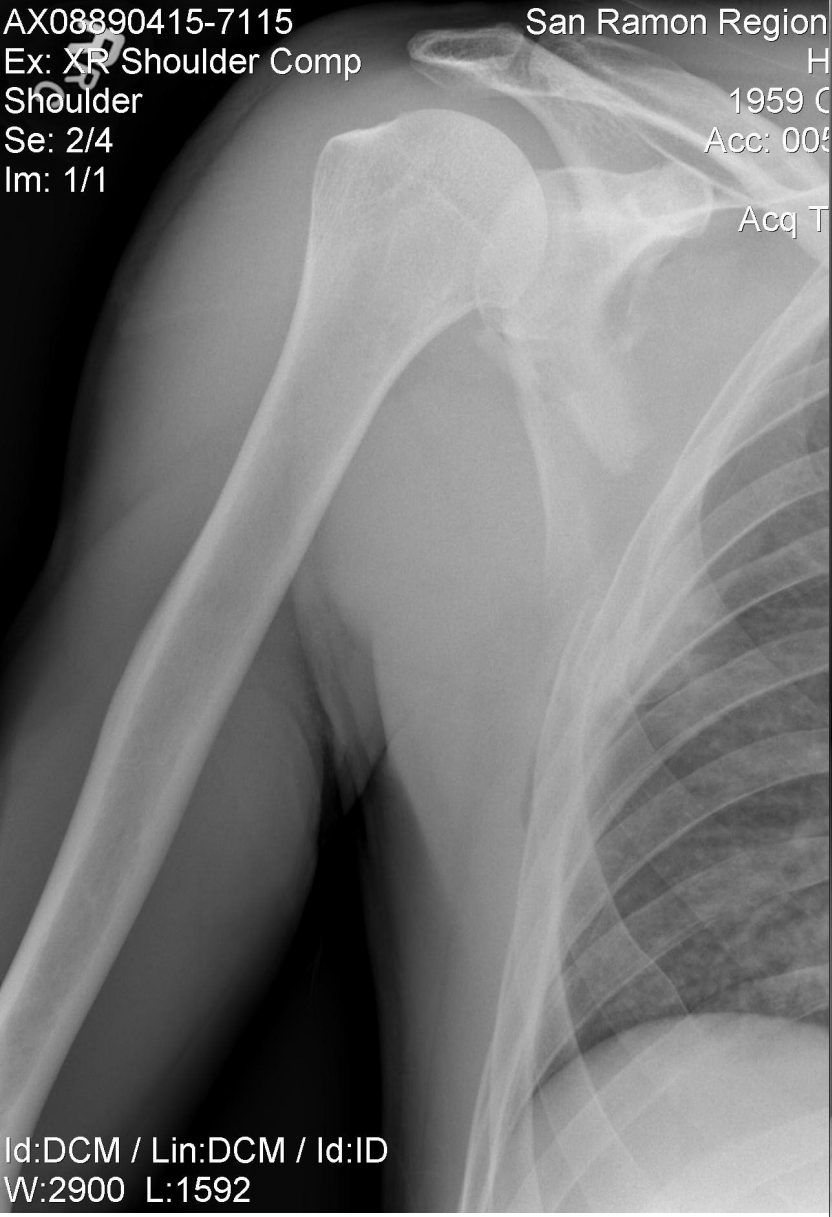
Lin:DCM / Lin:DCM / Id:ID
W:2252 L:1906



Lin:DCM / Lin:DCM / Id:ID
W:2517 L:2049

Severe DJD of the left shoulder
“bone on bone” with osteophytes

50 yo with posterior shoulder pain a fall in
tub. Decreased ROM and posterior TTP on
exam



AX08890415-7115
Ex: XR Shoulder Comp
Shoulder
Se: 2/4
Im: 1/1

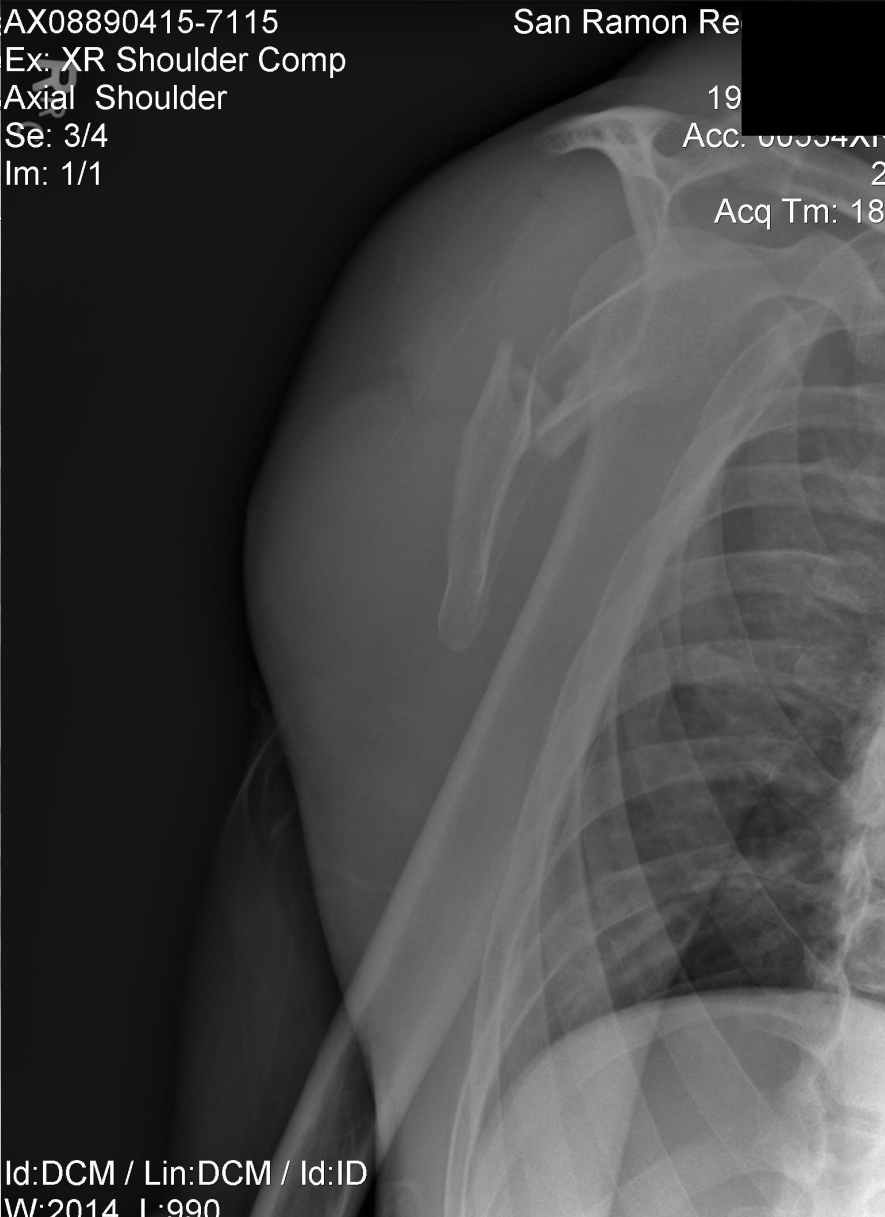
San Ramon Region
AX08890415-7115
HEX: XR Shoulder Comp
1959 C Shoulder
Acc: 005 Se: 1/4
Im: 1/1
Acq T

Id:DCM / Lin:DCM / Id:ID
W:2900 L:1592



San Ramon Region
AX08890415-7115
HEX: XR Shoulder Comp
1959 O Axial Shoulder
Acc: 005 Se: 3/4
Im: 1/1
Acq Tr

Id:DCM / Lin:DCM / Id:ID
W:2958 L:1618



San Ramon Re
AX08890415-7115
HEX: XR Shoulder Comp
1959 O Axial Shoulder
Acc: 005 Se: 4/4
Im: 1/1
Acq Tm: 18

Id:DCM / Lin:DCM / Id:ID
W:2014 L:990

Displaced scapular fracture

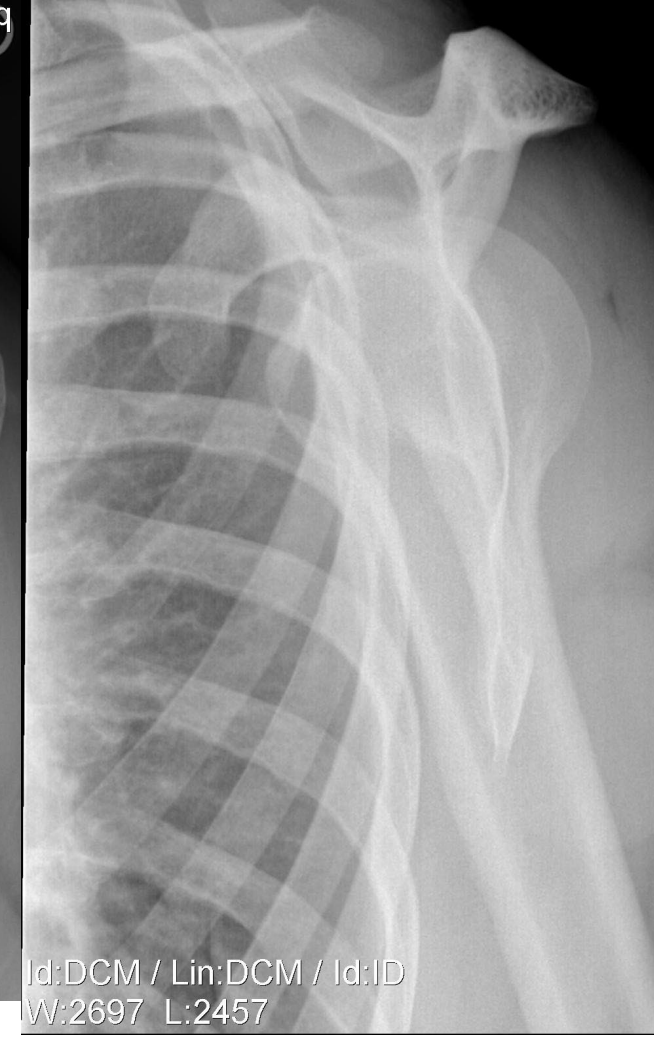
25 yo with anterior shoulder pain after
running into another player with his
shoulder playing basketball

AX08890415-7115
Ex: XR Shoulder Comp
Shoulder
Se: 2/5
Im: 1/1

San Ramon Regional Medical Center
AX08890415-7115
L
Ex: XR Shoulder Comp
Shoulder
Se: 4/5
Im: 1/1
Acc: 01
Acq

San Ramon Regional Medical Center
AX08890415-7115
L
Ex: XR Shoulder Comp
Shoulder
Se: 1/5
Im: 1/1

San Ramon Regional Medical Center
L
197
Acc:
2010 Feb 24
Acq Tm: 21:30:36.0688



Left AC joint “separation” (sprain)

71 yo with shoulder pain a fall in tub.
Decreased ROM and lateral TTP on exam

Urgent Care
Ex: PAR0985997
Shoulder grashey
Se: 2/3
Im: 1/1

PAMF/UC

PAMF/UC

B
19

L
2009 Nov 10
Img Tm: 18:48:30

2009 Nov 10
Img Tm: 18:45:54

SHOULDER

Shoulder grashey////L//

Id:DCM / Lin:DCM / Id:ID
W:32767 L:16383

SIZES ARE APPROXIMATE

SIZES ARE APPROXIMATE

Displaced L humeral head fracture

48 yo with L shoulder pain a fall off bike.
Decreased ROM and anterior TTP on exam.
Patient unable to do external rotation view
due to pain

AX08890415-7115
Ex: XR Shoulder Comp
Shoulder
Se: 1/3
Im: 1/1

19

ACC: ACC14947
2009 Nov 05
Acq Tm: 17:05:05.0641



Id:DCM / Lin:DCM / Id:ID
W:2868 L:2559

H: 0.25
F: 0.60

STE: 10

AX08890415-7115
Ex: XR Shoulder Comp
Shoulder
Se: 2/3
Im: 1/1

19

Acc: ACC14947
2009 Nov 05
Acq Tm: 17:05:48.0766



Id:DCM / Lin:DCM / Id:ID
W:3579 L:2218

H: 0.25
F: 0.50

STE: 10

Anterior dislocation L shoulder

62 yo with shoulder pain a fall in tub.
Decreased ROM and diffuse TTP on exam

AX08890415-7115
Ex: XR Shoulder Comp
Shoulder
Se: 3/4
Im: 1/1



0415-7115
Shoulder Comp
RIGHT



0415-7115
Shoulder Comp
er



Nondisplaced R humeral head fracture

17 yo with anterior shoulder pain after
running into another player with his
shoulder playing lacrosse



R midshaft clavicle fracture

4 yo not moving his R elbow after a fall.
DNVI

AX08890415-7115
Ex: XR Elbow Complet
Elbow
Se: 2/4
Im: 1/1

San Ram

Acq Tm: 16:40:21.0

3890415-7115
R Elbow Complet
W
3/4
1/1

San Ra

2011 Se: 1/4
Acq Tm: 16:41 Im: 1/1

3890415-7115
R Elbow Complet
N

San Ramon Re

21
Acc: 00554XR100009728
2010 May 13
Acq Tm: 16:39:13.0829

TBB
R

TBB
R

TBB
R

Id:DCM / Lin:DCM / Id:ID
W:2616 L:1729

H: 0.30
F: 0.50
STE: 12

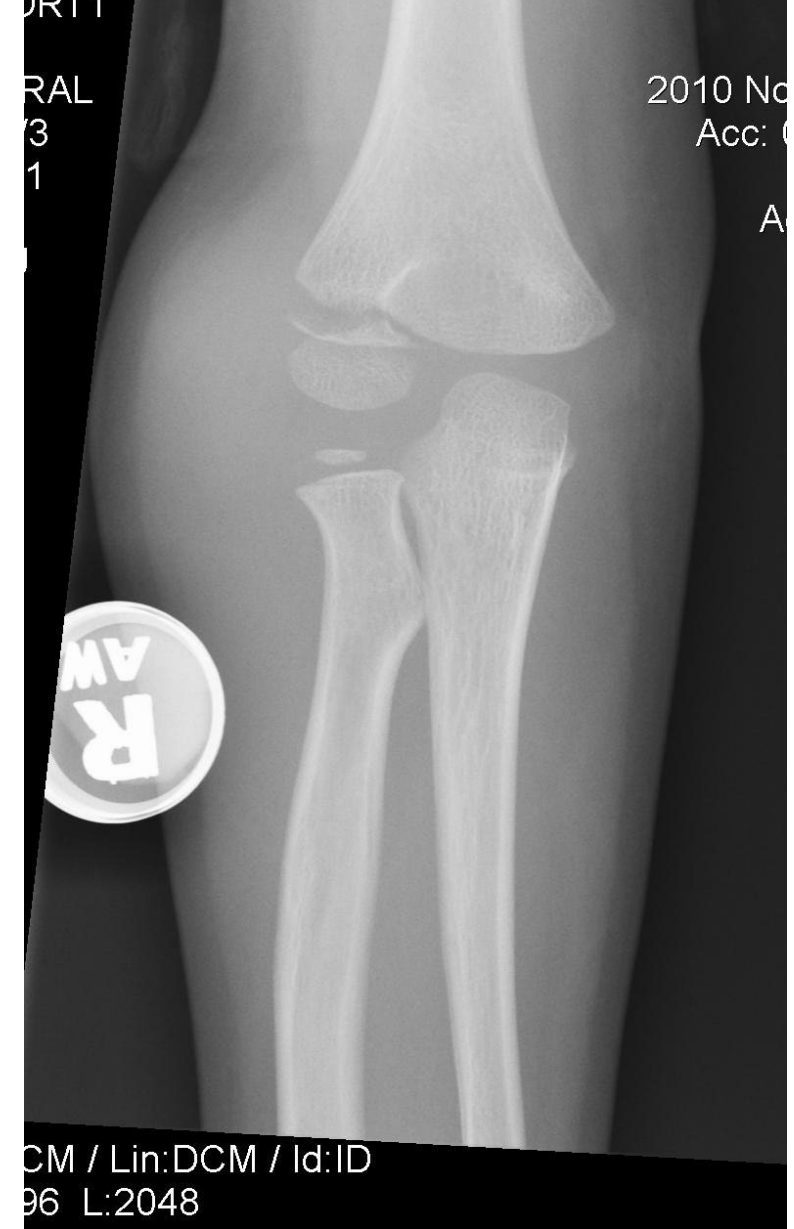
Id:DCM / Lin:DCM / Id:ID
W:2396 L:1612

Id:DCM / Lin:DCM / Id:ID
W:2512 L:1716

H: 0.30
F: 0.50
STE: 12

Displaced supracondylar fracture

5 yo not moving his elbow after a fall.
DNVI



Lateral condylar (capitellum) avulsion fracture

9 yo with stridor

AX08890415-7115
Ex: XR Neck Soft Tis
Soft Tissue Neck
Se: 1/3
Im: 1/1

2010 Jan 17
Acq Tm: 10:48:28.0391



AX08890415-7115
Ex: XR Neck Soft Tis
Soft Tissue Neck
Se: 2/3
Im: 1/1

Acc: ACC17107
2010 Jan 17
Acq Tm: 10:49:54.0610



Croup with subglottic narrowing - “steeple sign”

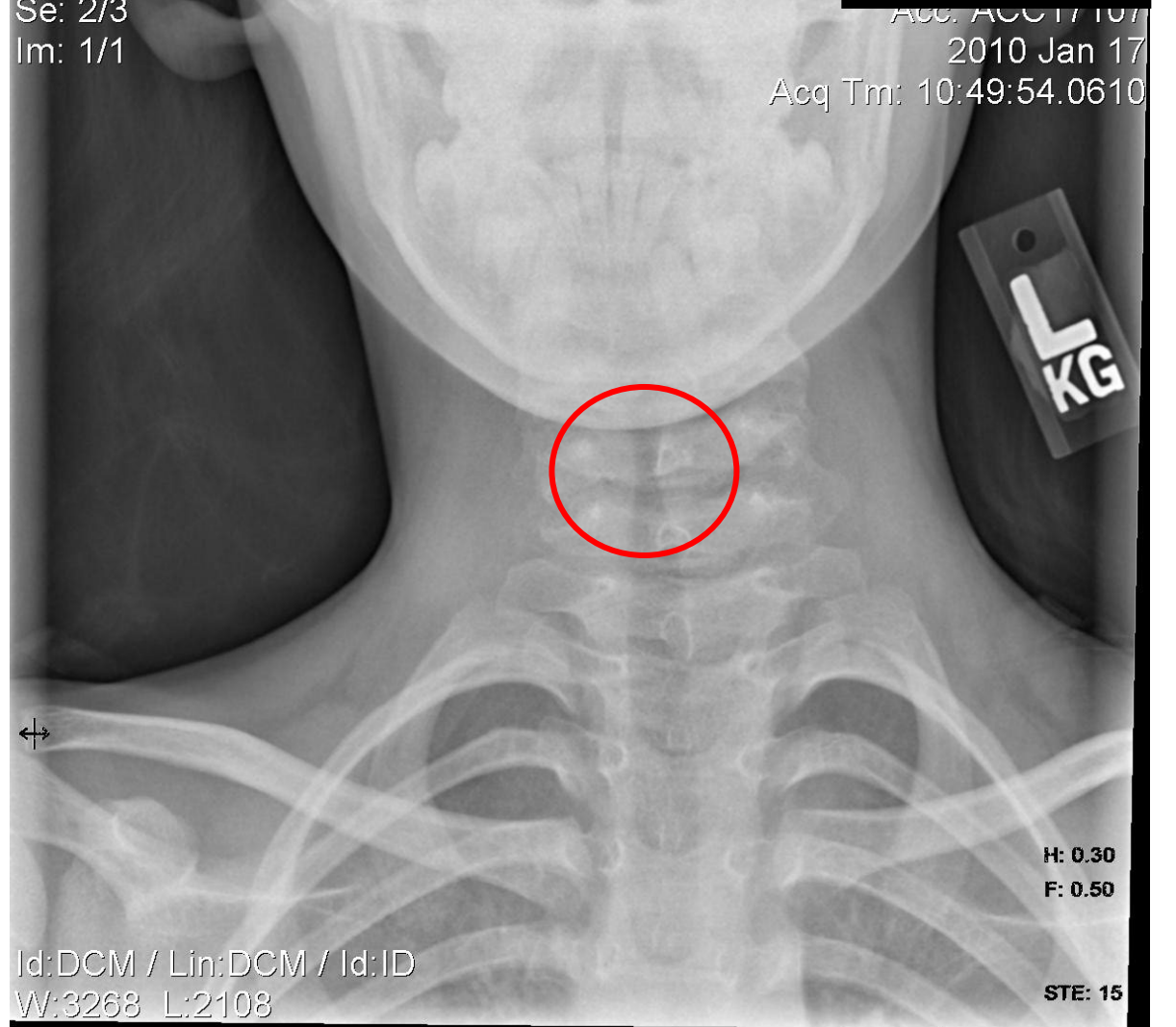
AX08890415-7115
Ex: XR Neck Soft Tis
Soft Tissue Neck
Se: 1/3
Im: 1/1

2010 Jan 17
Acq Tm: 10:48:28.0391



AX08890415-7115
Ex: XR Neck Soft Tis
Soft Tissue Neck
Se: 2/3
Im: 1/1

2010 Jan 17
Acq Tm: 10:49:54.0610



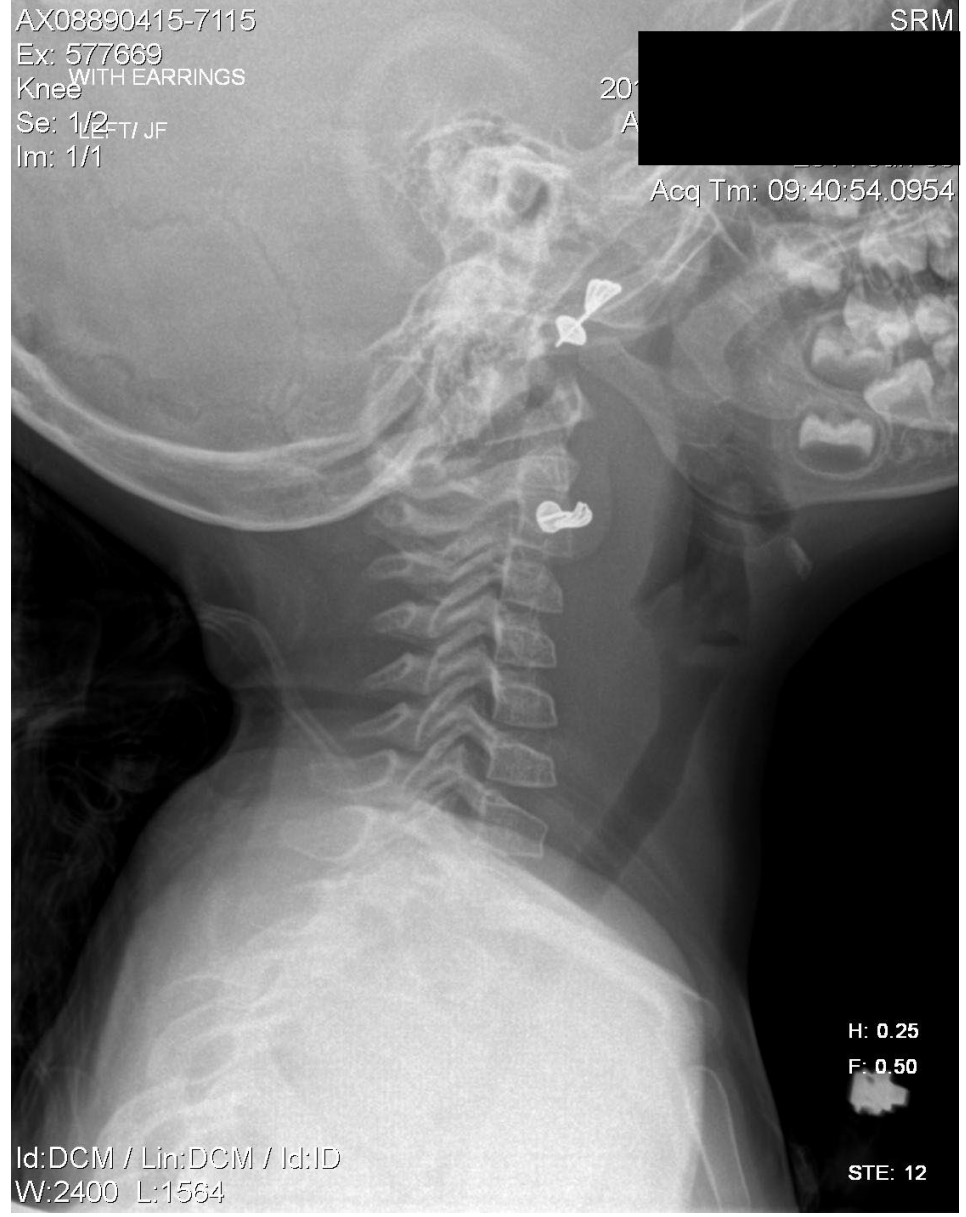
2 yo with stridor

AX08890415-7115
Ex: 577669
Knee WITH EARRINGS
Se: 1/2
Im: 1/1

SRM

20
A

Acq Tm: 09:40:54.0954



H: 0.25
F: 0.50

Id:DCM / Lin:DCM / Id:ID
W:2400 L:1564

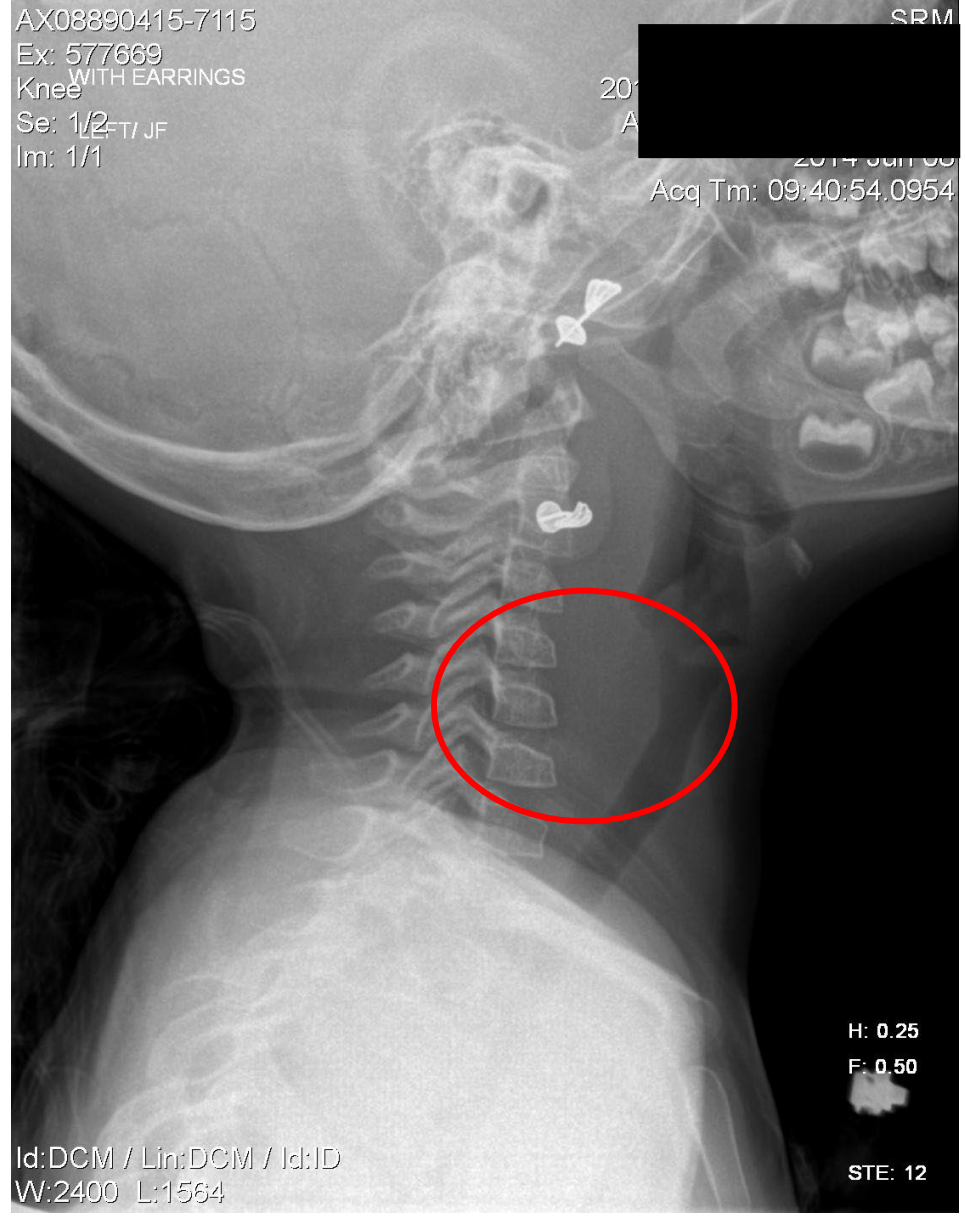
STE: 12

Retropharyngeal abscess

Swelling of prevertebral STs >> AP dimension
of vertebral body

AX08890415-7115
Ex: 577669
Knee WITH EARRINGS
Se: 1/2
Im: 1/1

SRM
20
A
2014 Jun 09
Acq Tm: 09:40:54.0954

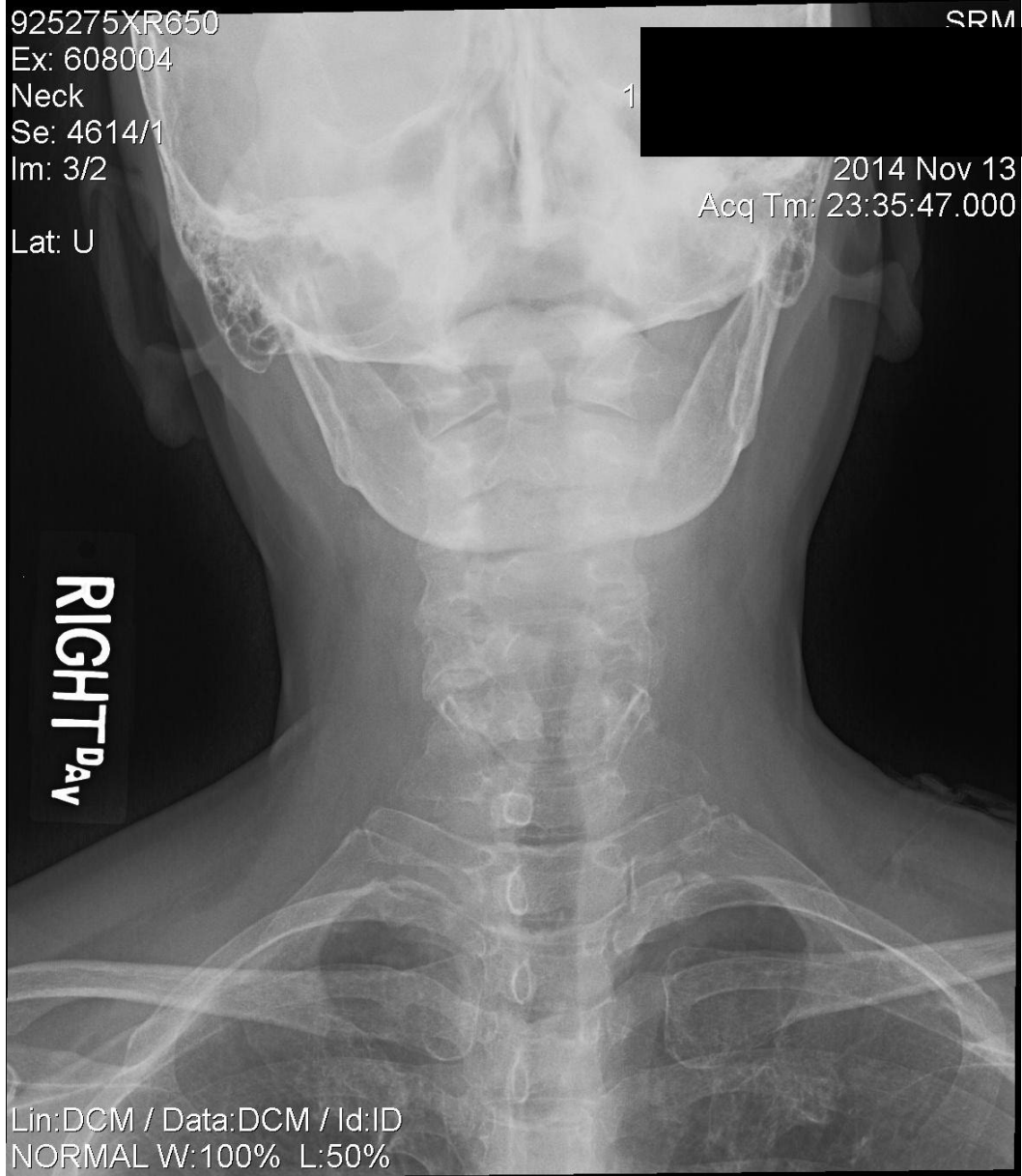


H: 0.25
F: 0.50

Id:DCM / Lin:DCM / Id:ID
W:2400 L:1564

STE: 12

66 yo with stridor



Epiglottitis

80 yo with stridor

AX08890415-7115
Ex: XR Neck Soft Tis
Soft Tissue Neck
Se: 1/2
Im: 1/1

San Ramon R

Acc: 00554XR100011821
2010 Jun 10
Acq Tm: 06:35:11.0766

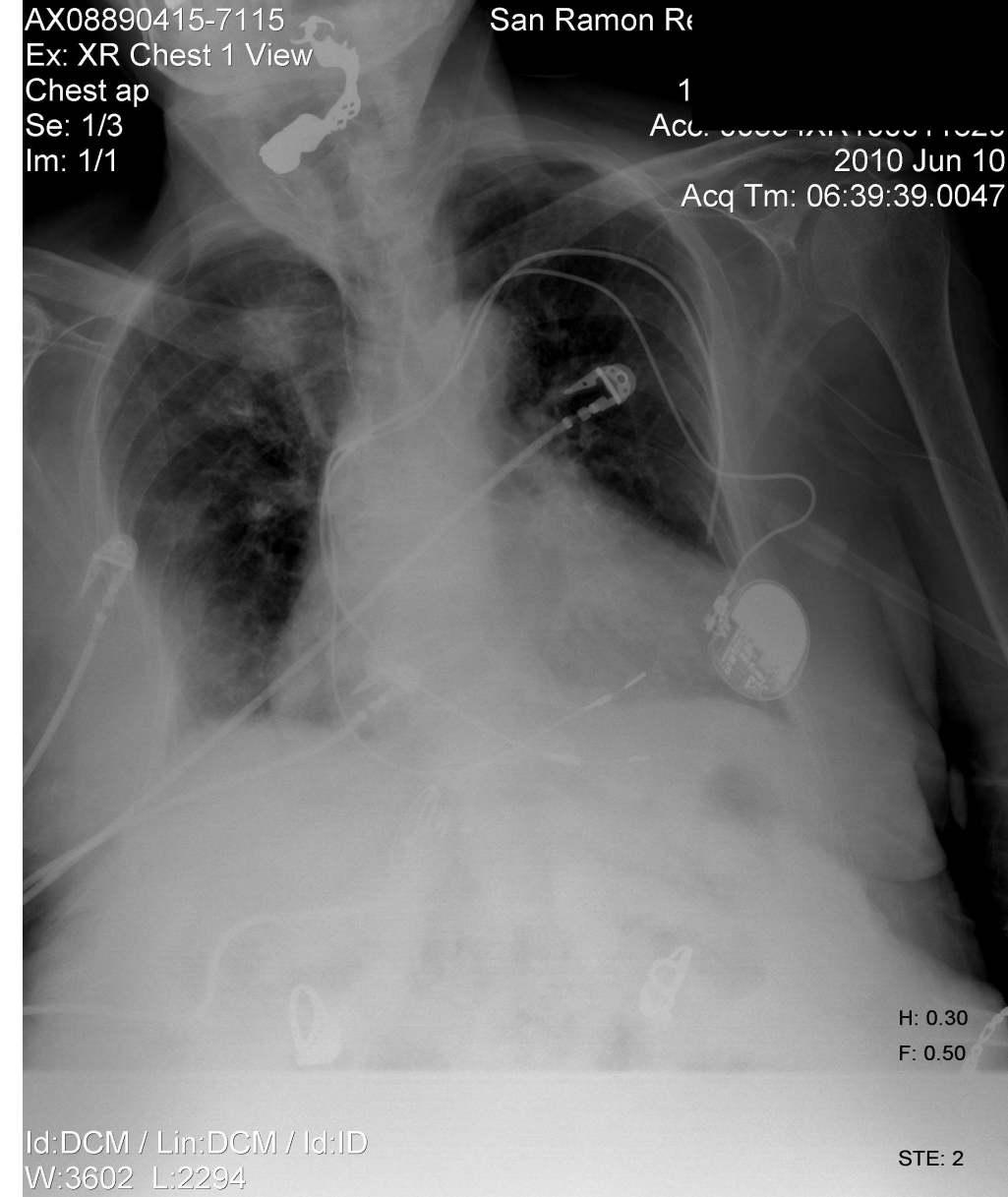


Id:DCM / Lin:DCM / Id:ID
W:4064 L:2039

AX08890415-7115
Ex: XR Chest 1 View
Chest ap
Se: 1/3
Im: 1/1

San Ramon R

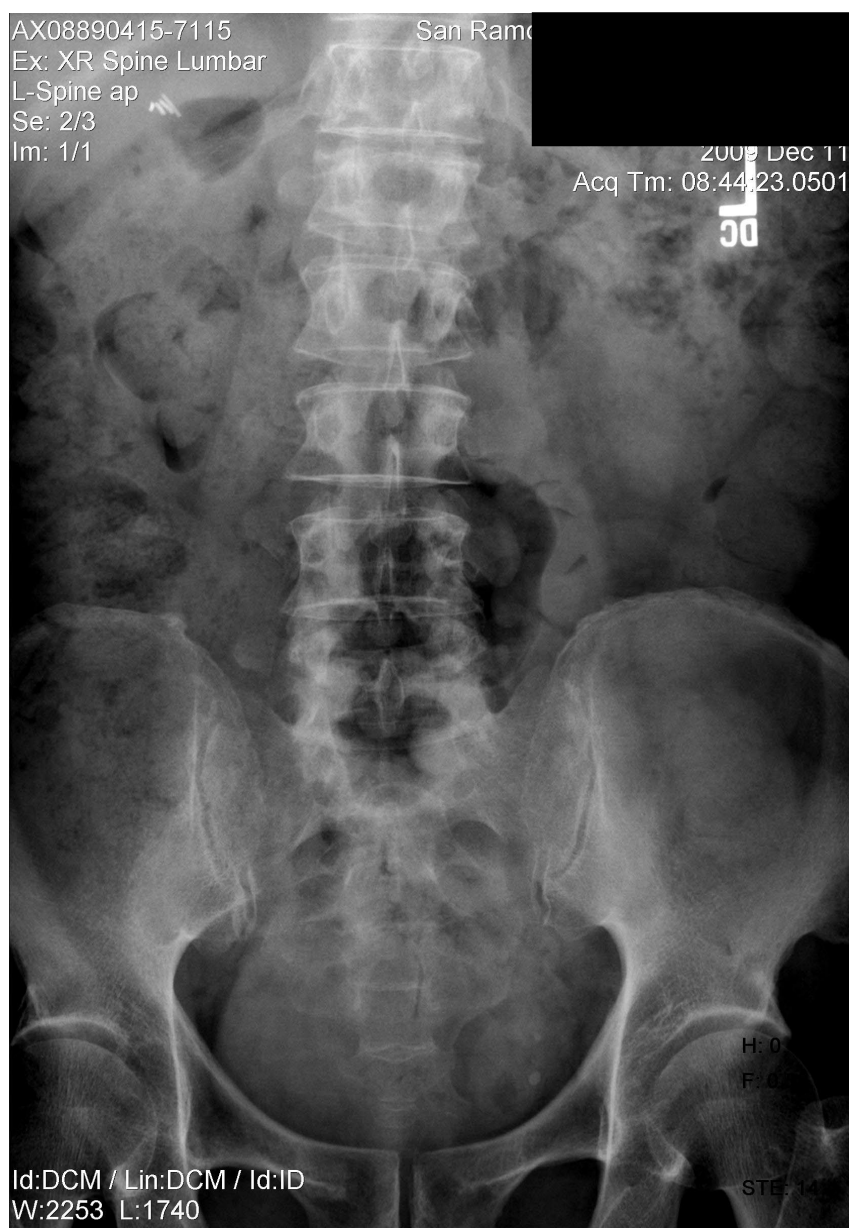
1
Acc: 00554XR100011821
2010 Jun 10
Acq Tm: 06:39:39.0047



Id:DCM / Lin:DCM / Id:ID
W:3602 L:2294

Partial denture in oropharynx

55 yo with severe back pain after bumpy boat ride. Very tender in midline L spine on exam. No neuro complications.



L1 compression fracture

54 yo with increasing low back pain after
golf game, no neuro symptoms, no
significant PMH

AX08890415-7115
Ex: XR Spine Lumbar
L-Spine lat
Se: 1/4
Im: 1/1

San Ramon



H: 0.40
F: 0.50

STE: 14

Id:DCM / Lin:DCM / Id:ID
W:2710 L:1972

AX08890415-7115
Ex: XR Spine Lumbar
L-Spine ap
Se: 3/4
Im: 1/1

San Ramon



H: 0.40
F: 0.50

STE: 14

Id:DCM / Lin:DCM / Id:ID
W:2256 L:2098

AX08890415-7115
Ex: XR Spine Lumbar
L-Spine L5-S1
Se: 2/4
Im: 1/1

San Ramon Regional Medical Center



Acc: 00004XR090027100
2009 Dec 31
Acq Tm: 15:00:00.0579

H: 0.40
F: 0.50

STE: 14

Id:DCM / Lin:DCM / Id:ID
W:2282 L:1535

Normal L spine

Xrays not typically needed in this situation

80 yo with fall onto left hip, ambulating
with difficulty with walker

DRPORT1

Ex:

TOWNE VIEW

Se: 1/1

Im: 1/1

Lat: U

19

Acc: 00554XR140018665

2014 Nov 11

Acq Tm: 17:48:27.984



(R)

MR

11/11/2014 17:48:27

SUPINE

Lin:DCM / Lin:DCM / PORTABLE

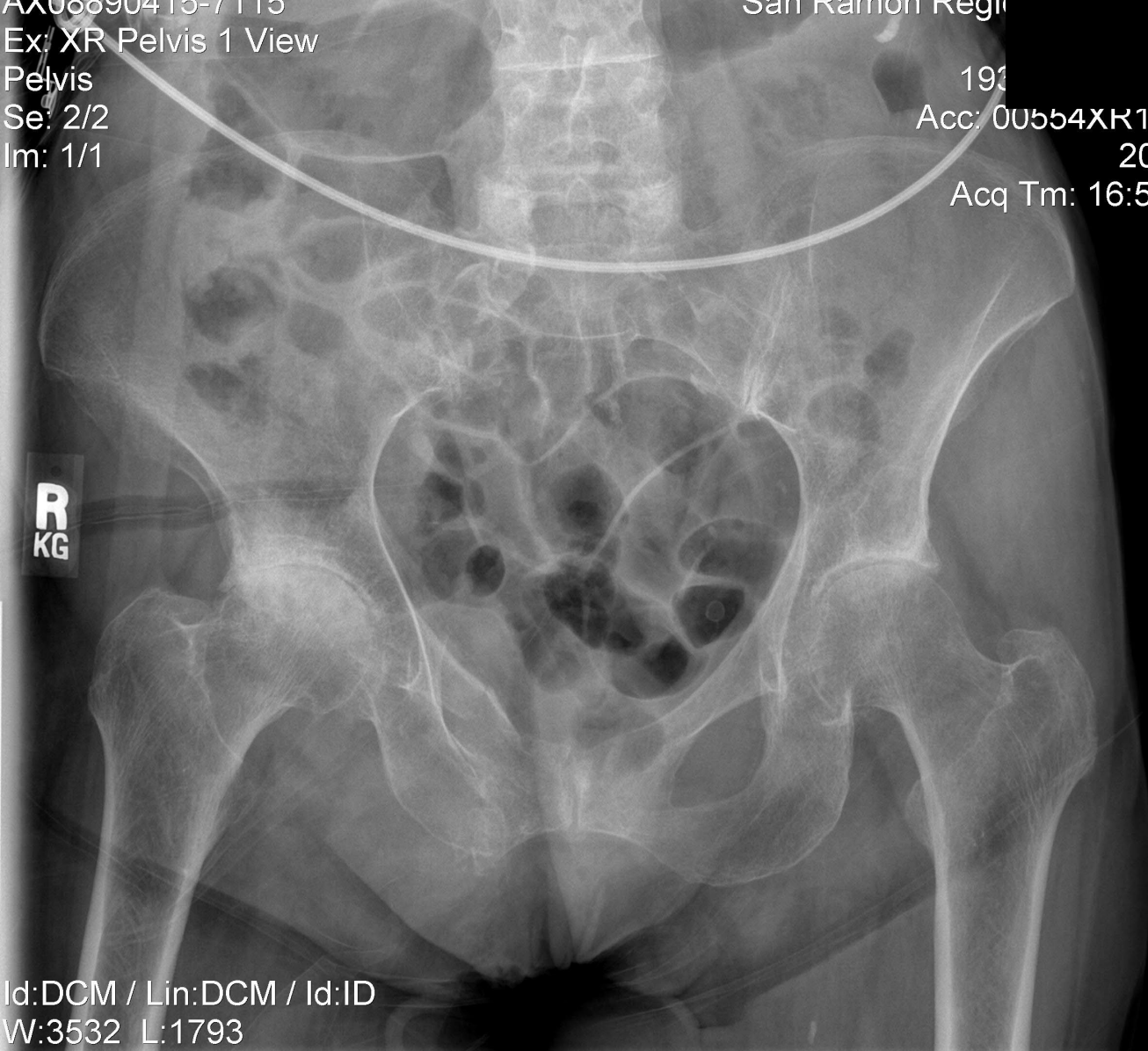
W:4096 L:2048

R inferior and superior pubic rami fractures

78 yo with fall onto left hip, ambulating
with difficulty with walker

AX08890415-7115
Ex: XR Pelvis 1 View
Pelvis
Se: 2/2
Im: 1/1

San Ramon Regi
193
Acc: 00554XR1000084/
2010 Apr 2
Acq Tm: 16:57:13.087



Id:DCM / Lin:DCM / Id:ID
W:3532 L:1793

AX08890415-7115
Ex: XR Hip 2 Views R
Hip
Se: 1/3
Im: 1/1

San Ramon Re
Acc
2010 Apr 27
Acq Tm: 16:50:54.0157



Id:DCM / Lin:DCM / Id:ID
W:4037 L:2491

R inferior and superior pubic rami fractures

40 yo fell onto elbow while roller-skating.
Diffusely swollen, minimal ROM

Carbonx1
Ex: 3849676.0

Se: 1001/4
Im: 1001/1

UP_EXM

Portable



Lin:DCM / Lin:DCM / Id:ID
W:2880 L:1200

Carbonx1
Ex: 3849676.0

Se: 1002/4
Im: 1002/1

UP_EXM

Acq Tm: 12:56



Lin:DCM / Lin:DCM / Id:ID
W:2880 L:1200

SAN RAMON
Ex: 3849676.0

Se: 1003/4
Im: 1003/1

UP_EXM

Acq Tm



Lin:DCM / Lin:DCM / Id:ID
W:2880 L:1200

SAN RAMON
1
Acc

Acq Tm

Port

Elbow dislocation

35 yo fell onto arm while running.
Minimally tender but pain with all
movements and decreased ROM



Radial head fracture with effusion

44 yo with finger pain after
hyperextension injury



Volar base of middle phalanx fracture –
“volar plate” fracture in area of flexor
tendon insertion

49 yo diffusely painful hand and fingers
after closed in door

15
complete

San Ramon Regional Medical Center
5
complete

19
Acc: 0000171100000000
2010 Feb 10
Acq Tm: 22:52:59.0438



H: 0.30
F: 0.50
STE: 12

CM / Id:ID

San Ramon Regional Medical Center
08890415-7115

XR Hand Complete

nd
Acc: 0000171100000000
1/4
Im: 1/1
Acq Tm: 22:52:59.0438



M / Id:ID

Id:DCM / Lin:DCM / Id:ID
W:2092 L:1660

San Ramon Regional Medical Center

Acc: 0000171100000000
2
Acq Tm: 22:52:59.0438



4th metacarpal fracture

27 yo diffusely painful hand and fingers
after closed in door

AX08890415-7115
Ex: XR Hand Complete
Hand
Se: 2/4
Im: 1/1

San Ramon

90415-7115
Hand Complete

San Ramon Regional Medical C

AX08890415-7115
Ex: XR Hand Complete
Hand
Se: 1/4
Im: 1/1

San Ramon R

f

Acc: 00007115

20

Acq Tm: 18:



20 Im: 1/1
Acq Tm: 18:2



2010 Im: 1/1
Acq Tm: 18:26:05



H: 0
P: 0

STE

Id:DCM / Lin:DCM / Id:ID
W:1920 L:1588

Id:DCM / Lin:DCM / Id:ID
W:2104 L:1520

Id:DCM / Lin:DCM / Id:ID
W:2260 L:1762

Fractures of bases of 2nd and 3rd proximal phalanges

9 yo fall onto hand/arm. Pain is difficult for him to localize – maybe wrist or forearm.
Seems tender near the wrist.



Distal radius torus fracture

65 yo patient with diabetes with foot pain and redness after bumping and scraping his dorsal foot on furniture at home. He is limping. VS OK, exam indicates dorsal foot cellulitis

DRPORT1
Ex:
AP
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Im: 1/1
Lat: U

19

2016 Jan 11
Acq Tm: 15:25:25.265



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W:4096 L:2048



Splint, Cephalexin 500 mg QID and ortho follow-up for this patient?

Splint, Cephalexin 500 mg QID and ortho follow-up for this patient?

What do you see?

Charcot foot – foot looks “collapsed” and tarsal bones are all meshed together

but more importantly.....

DRPORT1
Ex:
AP
Se: 1/3
Im: 1/1
Lat: U

19

2016 Jan 11
Acq Tm: 15:25:25.265



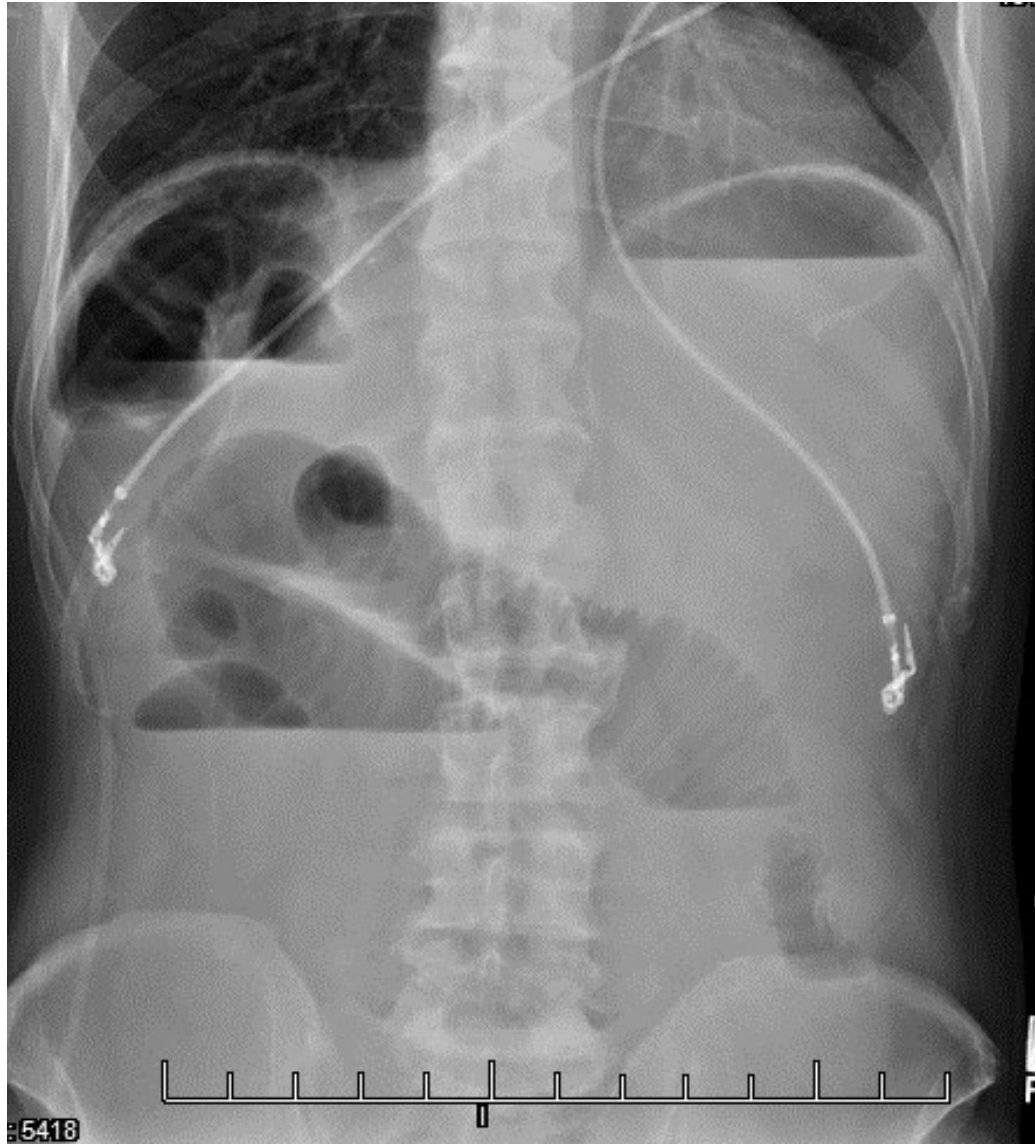
Lin:DCM / Lin:DCM / Id:ID
W:4096 L:2048



There is soft-tissue gas in the dorsal foot

ED referral promptly

69 yo with nausea and abdominal distension for several days, feels constipated. VS OK. Very active BS, moderately distended and diffusely mildly tender on exam



Multiple air-fluid levels in **dilated** bowel = ?

Multiple air-fluid levels in **dilated** bowel =
suspicious for SBO

Multiple air-fluid levels in **nondilated** bowel =

“nonspecific bowel gas pattern”

may be AGE, ileus or early SBO, etc

50 yo with sharp upper AP for a day and now it hurts to breath; upper abdomen is tender, lungs are clear but she's taking very shallow breaths

925275XR650

SRM

Ex: 578399

Chest

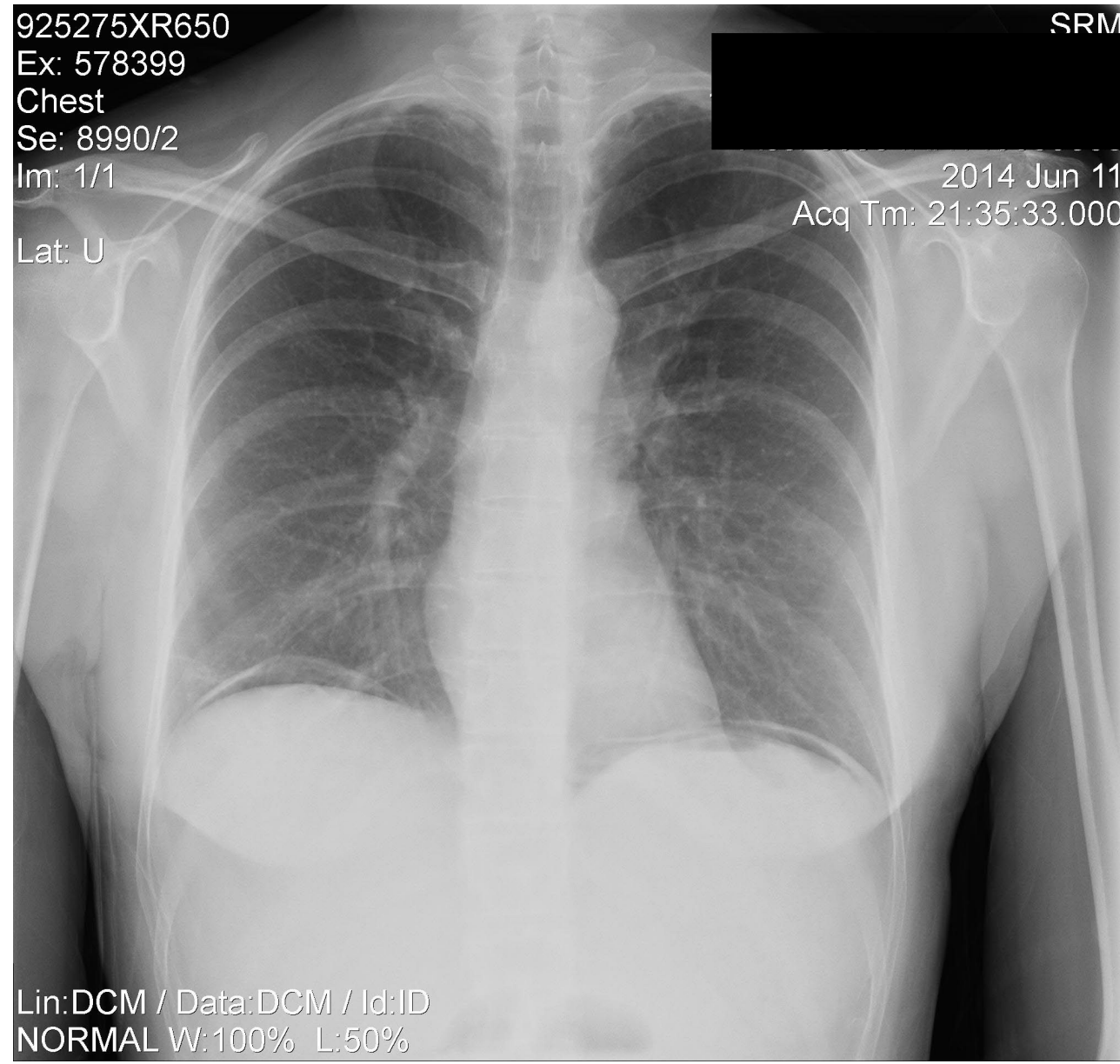
Se: 8990/2

Im: 1/1

Lat: U

2014 Jun 11
Acq Tm: 21:35:33.000

Lin:DCM / Data:DCM / Id:ID
NORMAL W:100% L:50%



Pneumoperitoneum – found to have perforated duodenal ulcer on laparoscopy