

A 57-year-old woman complaining of cervical and lumbar pain for 3years

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PM&R

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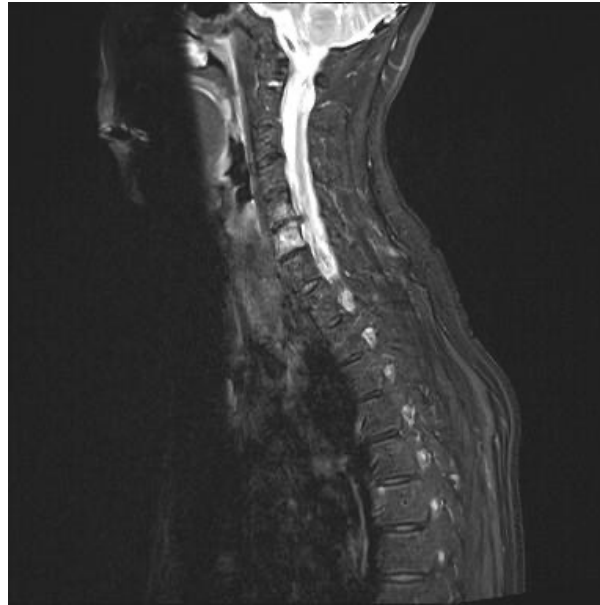
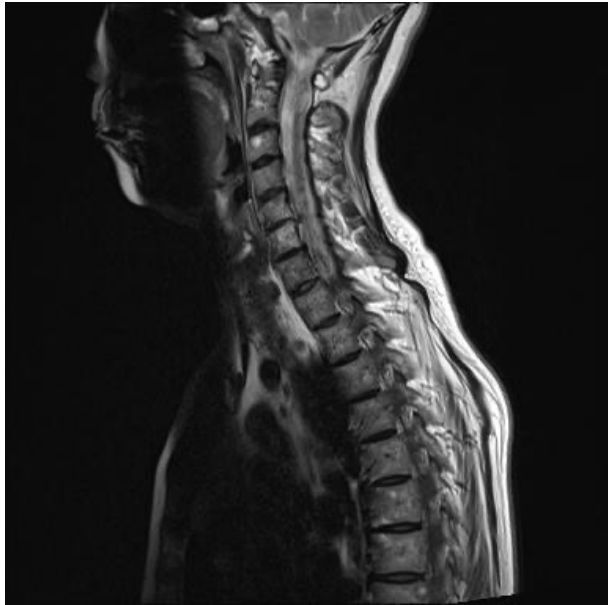
Back pain

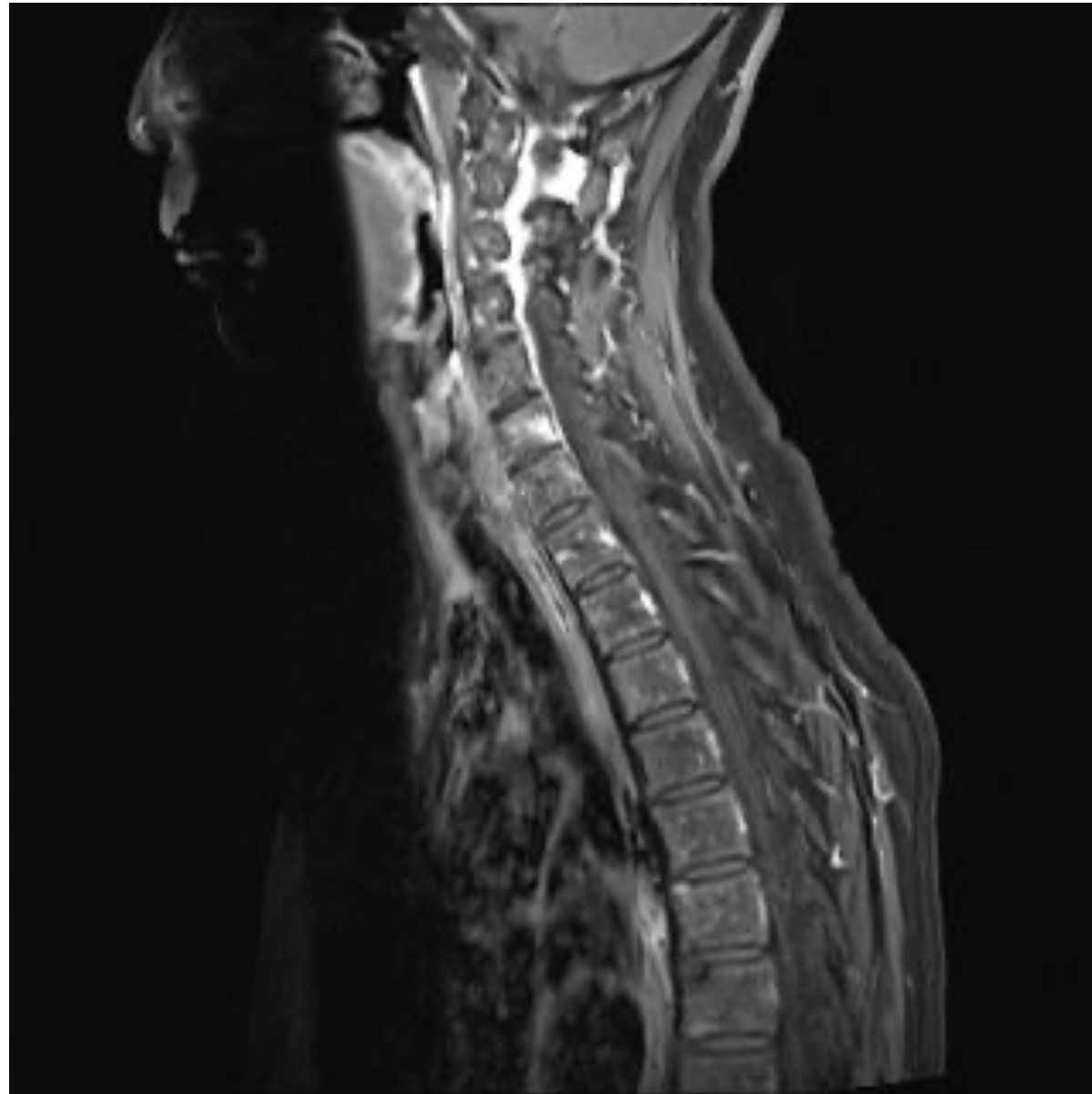
- 56/F
- 2022.08.04;
 - 3-4년 전부터 지속되는 back pain으로 지속적인 치료를 받고 있었음
 - 이후 점차 통증이 악화소견 있었으며 최근에는 thoracic & neck pain이 동반되어 지역 척추전문병원에서 spine MRI검사를 시행하고 큰 병원 권유 받고 내원
- DM(-), HTN(-)
- Resting pain(+)
- Night pain(+)
- Weight loss (-)
- Motor : N-S

Hx. & P/E

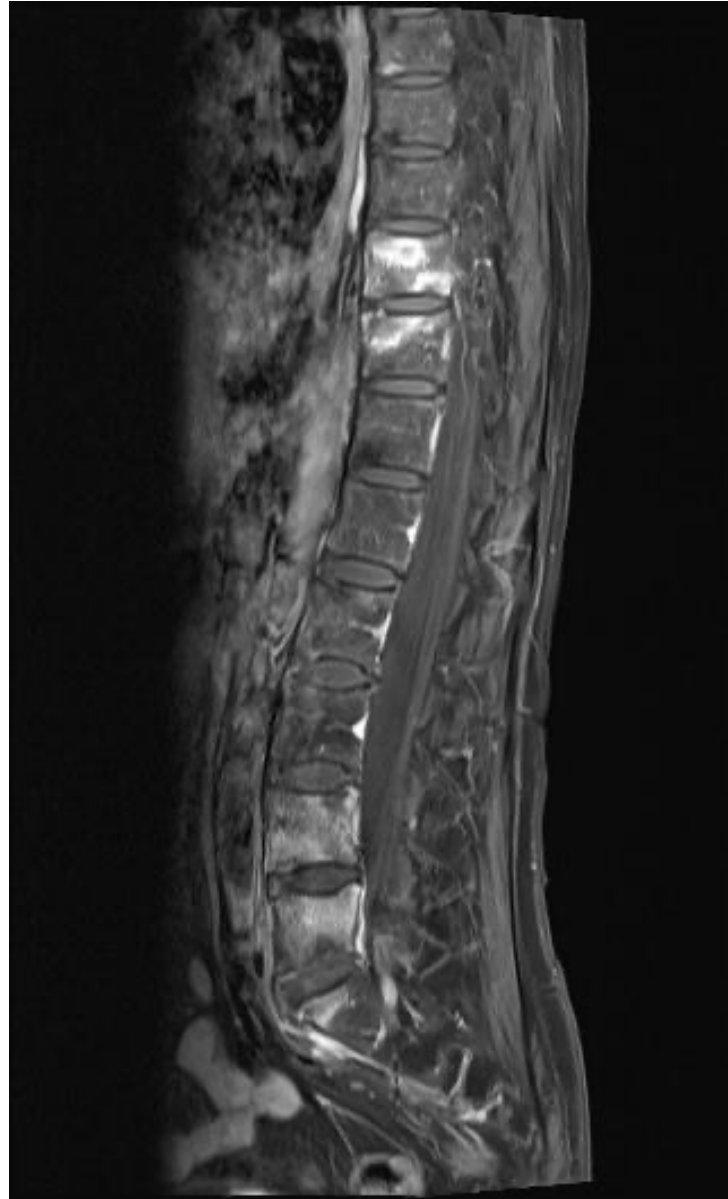
- LBP
 - 걷거나, sit to stand; 통증 증가
 - 통증은 VAS: 7
- PNP
 - 우리한 양상의 통증으로 extension, flexion시 악화 되는 양상
 - VAS: 6
 - Both shoulder쪽으로 우리한 양상으로 뻗칠 때가 있다.
- Winging scapular(-)
- Spurling sign(-)
- Hoffman's sign:-/-
- SLRT: ?/? – hamstring tightness
- FNST: -/-
- DTR: Kj, Aj ; ++/++
- Voiding difficulty (-)
- Defecation : N-S

cervical MRI





lumbar MRI hancement



lumbar MRI hancement



Spine MRI

Clinical information : R/O spine metastasis.

Multiple BM replacing lesion with enhancement of vertebral bodies in C6, T10, T11, L2, L4, L5 and S1.

No abnormal soft tissue lesion.

No evidence of herniated lumbar disc nor central canal / foraminal stenosis.

CONCLUSION

R/O Multiple spinal metastases.

- DDx. Multiple myeloma.

RECOMMEND

Breast cancer origin의 가능성에 대해 evaluation을 권합니다.

Assessments

1. Spinal metastasis
2. Hematopoietic cancer

Chest CT

- Clinical information : r/o spine metastasis
- Fibrocalcified Tbc. sequelae in RUL.
Subsegmental atelectasis or fibrosis in LLL.
- No CT evidence of pulmonary metastasis.
No endobronchial lesion.
No significant enlarged mediastinal & hilar LNs.
No pleural effusion in both.
- Multiple bony sclerotic lesion in sternum, manubrium, & T-L spine.
- probably, bone metastasis.

Abdominal CT

Small hepatic parenchymal calcification in S8 (about 0.6 cm)

Rt. renal and hepatic cysts are seen.

Other abdominal solid organs are unremarkable.

Multifocal osteoblastic change in vertebra.

No enlarged LN or fluid collection is seen in abdomen.

CONCLUSION

R/O Vertebral metastases.
- DDx. multiple myeloma.

Lab finding

EDTA(WB)					<input type="checkbox"/>	
ER-CBC (5종)	WBC	7.44	K/uL		<input type="checkbox"/>	4 ~ 10
	RBC	4.13	M/uL		<input type="checkbox"/>	4 ~ 5.4
	Hb	12.4	g/dL		<input type="checkbox"/>	12 ~ 16
	Hct	37.8	%		<input type="checkbox"/>	37 ~ 47
	RDW	12.4	%		<input type="checkbox"/>	11.5 ~ 15
	MCV	91.7	fL		<input type="checkbox"/>	80 ~ 98
	MCH	30	pg		<input type="checkbox"/>	27 ~ 33
	MCHC	32.8	g/dL		<input type="checkbox"/>	32 ~ 36
	PLT	304	K/uL		<input type="checkbox"/>	140 ~ 440
	Pct	0.31	%		<input type="checkbox"/>	0.13 ~ 0.4
	MPV	10.1	fL		<input type="checkbox"/>	8 ~ 12.5
	Neu	53.7	%		<input type="checkbox"/>	40 ~ 74
	Lymph	37.9	%		<input type="checkbox"/>	20 ~ 44
ER-WBC DIFF	Mono	4.3	%		<input type="checkbox"/>	2 ~ 9
	Eos	2.5	%		<input type="checkbox"/>	0 ~ 7
	Baso	0.4	%		<input type="checkbox"/>	0 ~ 2
	Luc	1.2	%		<input type="checkbox"/>	0 ~ 5

Lab finding

## 일반(Urine)				
ER-UA	Color	Amber	<input type="checkbox"/>	
	Blood	(-)	<input type="checkbox"/>	(-)
	Bilirubin	(-)	<input type="checkbox"/>	(-)
	UBG	Normal	<input type="checkbox"/>	Normal
	Ketone	(-)	<input type="checkbox"/>	(-)
	Protein	(-)	<input type="checkbox"/>	(-)
	Nitrite	(-)	<input type="checkbox"/>	(-)
	Glucose	Normal	<input type="checkbox"/>	Normal
	pH	7.0	<input type="checkbox"/>	4.8 ~ 8
	SG	1.019	<input type="checkbox"/>	1 ~ 1.03
	Leuko	(-)	<input type="checkbox"/>	(-)
	CLA	Clear	<input type="checkbox"/>	clear
	RBC	2 - 3 /HPF	<input type="checkbox"/>	0 ~ 3
UA-mic	WBC	5 - 10 /HPF	<input type="checkbox"/>	0 ~ 5
	Non-squamous cell	1+ /HPF	<input type="checkbox"/>	
	Squamous cell	1+ /HPF	<input type="checkbox"/>	
	Bacteria	moderate /HPF	<input type="checkbox"/>	
			<input type="checkbox"/>	
Plain(s)E9			<input type="checkbox"/>	
Ca	10.1 mg/dL		<input type="checkbox"/>	8.6 ~ 10.6
Mg	2.4 mg/dL		<input type="checkbox"/>	1.9 ~ 2.5

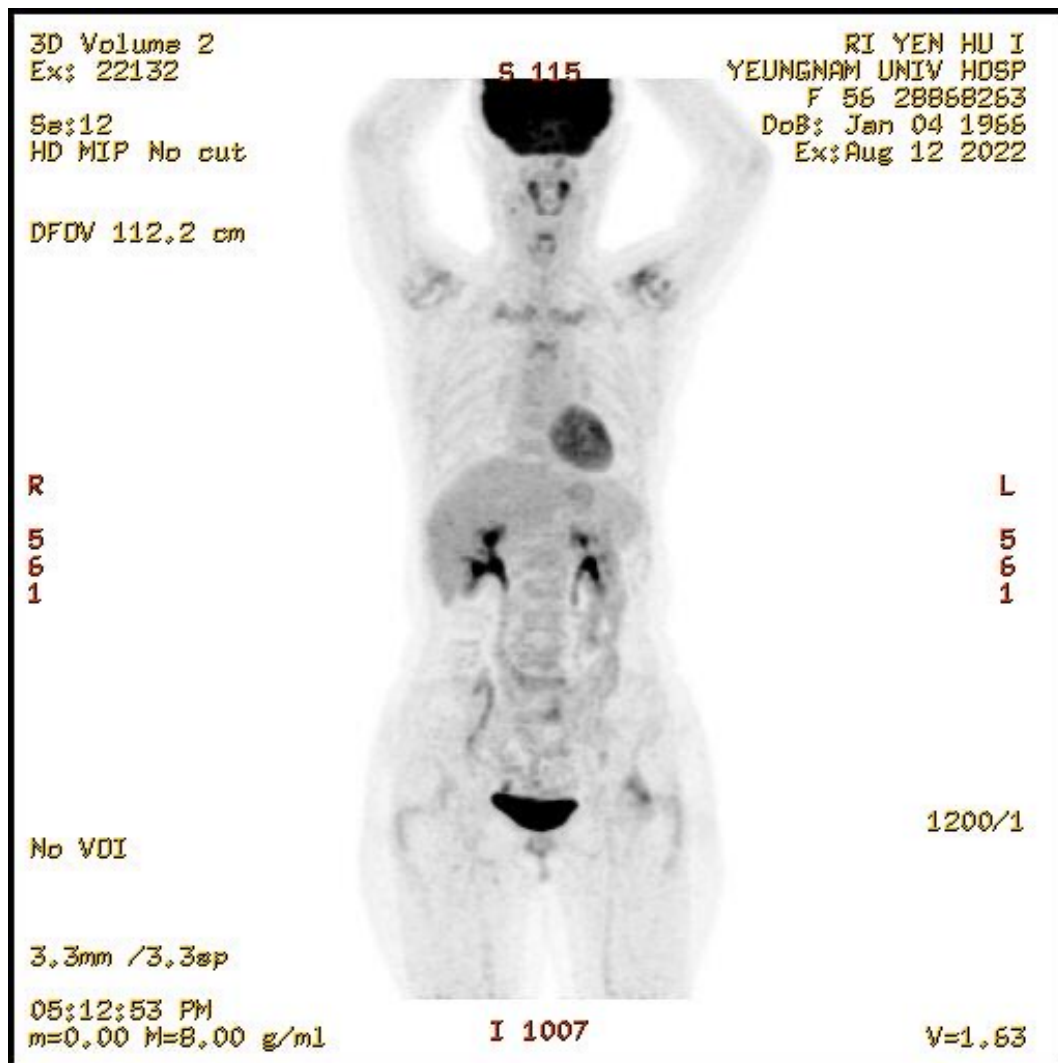
Lab finding

Plain(S)					<input type="checkbox"/>	
STAT-P	Na		142	mEq/L	<input type="checkbox"/>	135 ~ 145
	K		4.2	mEq/L	<input type="checkbox"/>	3.5 ~ 5.5
	Cl		101	mEq/L	<input type="checkbox"/>	98 ~ 110
	Glu		73	mg/dL	<input type="checkbox"/>	70 ~ 110
	T-Bil		0.55	mg/dL	<input type="checkbox"/>	0.1 ~ 1.2
	D-Bil		0.19	mg/dL	<input type="checkbox"/>	0 ~ 0.3
	AST		24	IU/L	<input type="checkbox"/>	10 ~ 35
	ALT		11	IU/L	<input type="checkbox"/>	0 ~ 40
	BUN		7.8	mg/dL	<input type="checkbox"/>	8 ~ 23
	CRE		0.54	mg/dL	<input type="checkbox"/>	0.5 ~ 0.9
	B/C		14		<input type="checkbox"/>	8 ~ 24
	ALP		113	IU/L	<input type="checkbox"/>	30 ~ 120
	I-Bil		0.36	mg/dL	<input type="checkbox"/>	0.1 ~ 1
	UA		5.5	mg/dL	<input type="checkbox"/>	2.6 ~ 6
	TP	7.62	g/dL		<input type="checkbox"/>	6.5 ~ 8.2
Alb	Alb		4.36	g/dL	<input type="checkbox"/>	3.5 ~ 5
	A/G		1.3		<input type="checkbox"/>	1 ~ 2.1
CRP		0.532	mg/dl		<input type="checkbox"/>	0 ~ 0.5
CPK		69	IU/L		<input type="checkbox"/>	1 ~ 145

Lab finding

*Plain(s)E9				<input type="checkbox"/>	
IgGAM	IgG	1394	mg/dL	<input type="checkbox"/>	★ 700 ~ 1600
	IgA	483	mg/dL	<input type="checkbox"/>	
	IgM	129	mg/dL	<input type="checkbox"/>	
*EDTA(WB)				<input type="checkbox"/>	
ESR		52	mm/H	<input type="checkbox"/>	0 ~ 25
*Citrate(P)				<input type="checkbox"/>	
D-dimer Qn` t		0.34	ug/ml FEU	<input type="checkbox"/>	0 ~ 0.5
*Plain(s)				<input type="checkbox"/>	
kappa	kappa	31.27	mg/L	<input type="checkbox"/>	3.3 ~ 19.4 [녹십자 [녹십자 위탁결과] 5.71 ~ 26.3 [SCL 위 0.26 ~ 1.65 [SCL 위
	kappa/lambda dFLC	7.79		<input type="checkbox"/>	
lambda	lambda	23.48	mg/L	<input type="checkbox"/>	
	kappa/lambda ratio	1.33		<input type="checkbox"/>	

PET-CT



[Clinical comment]

r/o spinal metastasis
primary origin 확인 위해 촬영합니다.

[Findings]

- Multifocal osteoblastic/sclerotic bone lesions in the C-T-L spines and sternum.

: without abnormal FDG uptake.

: No obvious osteolytic lesions are noted.

- Mild uneven FDG uptake around both shoulder, sternoclavicular and sternomanubrial joint.

... suggestive of arthritic change.

CONCLUSION

촬영시간 및 방법 : 2 min / bed, total 8 beds
FROM HEAD TO ABOVE KNEE

A combined CT scan was performed, but was used only for attenuation correction and anatomic localization. If a comprehensive diagnostic CT is required, the Radiology Department should be consulted.

RECOMMEND

1. No abnormal hypermetabolism to suggest primary malignancy.

2. Multifocal osteoblastic/sclerotic bone lesions in the C-T-L spines and sternum without FDG avidity.

... cause to be determined.

Rec) bone biopsy, if clinically needed.

(dense lesions: sternal manubrium, L4 right hemivertebra...)

Bone biopsy

► Diagnosis ◀

Bone, spine, biopsy:

1. T10: Fragments of bone and hematopoietic cells present

No pathologic abnormality

2. T5: Consistent with osteomyelitis

NOTE:

Immunohistochemical stain for Cytokeratin (AE1/AE3) was performed.

There is no evidence of malignancy.

Problem list

- Spinal MRI: multiple low signal on T1 & high signal on T2, enhancement (+)
- ESR, CRP: High
- Chronic pain for several years
- Inflammatory pain
- No cancer metastasis