

Recurrent pericarditis, nausea and hypotension

ESIM Winterschool 2012, Saas Fee

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Emergency Department

Male, 42 years

- Referral to emergency department by general practitioner
- Symptoms: frequent vomiting, low blood pressure

Medical History:

2004 myopericarditis

2006 transient ischemic attack

2006 acute decompensated heart failure due to myopericarditis

History / Physical examination

Since two days:

- Frequent vomiting, no other gastrointestinal complaints
- No specific other complaints, no myalgia, dyspnea or headache
- Recent holiday to Germany and Spain
- Rx ramipril, simvastatin; no alcohol or substance abuse

Physical examination:

RR 106/85; Pulse 102 beats/min; Temperature 36.2

Pulmones: decreased breathing sounds right lower lobe

Cor S1S2 no murmurs

Extremities: cold, pulses intact

Laboratory examination

Na 138 mmol/l (135-145)

K 4.0 mmol/l (3.5-5.0)

Ca_{corr} 1.97 mmol/l (2.20-2.65)

Fosf 1.32 mmol/l (0.80-1.40)

Alb 37 g/l (35-50)

Bili 20 μmol/l (<17)

AF 82 U/l (<120)

γGT 89 U/l (<50)

AST 2227 U/l (<37)

ALT 2393 U/l (<41)

LDH 3926 U/l (<450)

Creat 200 μmol/l (65-115)

CRP 142 g/l (<8)

Hb 11.1 mmol/l (8.6-10.6)

Leucocytes 11.6 10⁹/l (3.5-10)

Thrombo 178 10⁹/l (150-400)

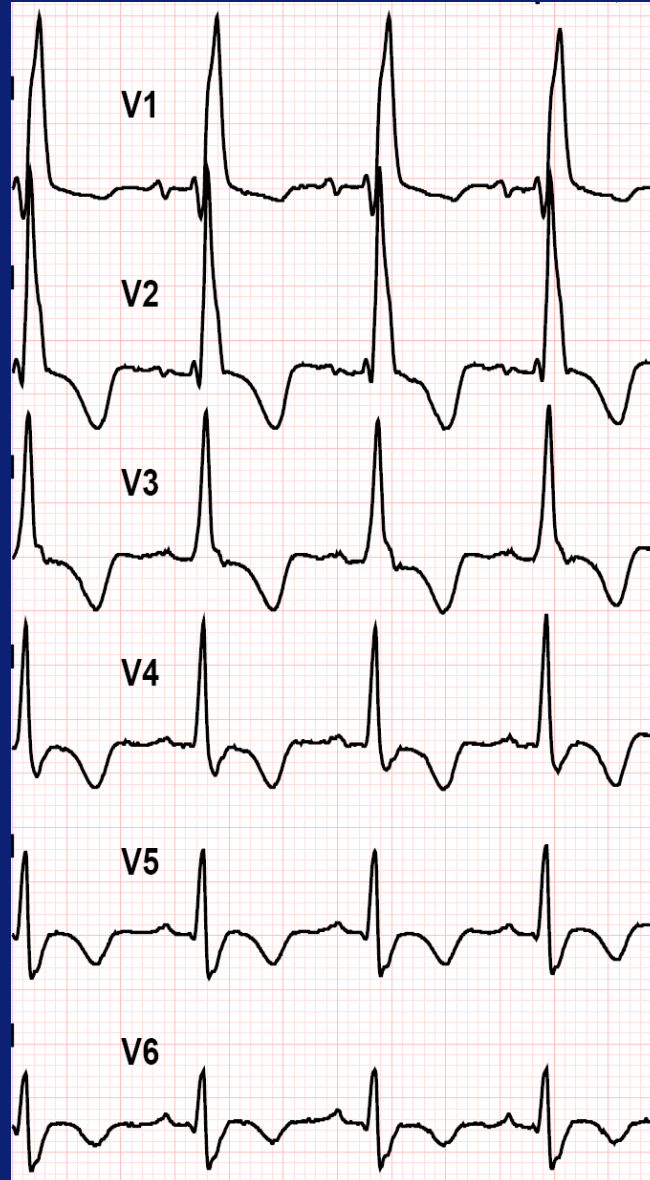
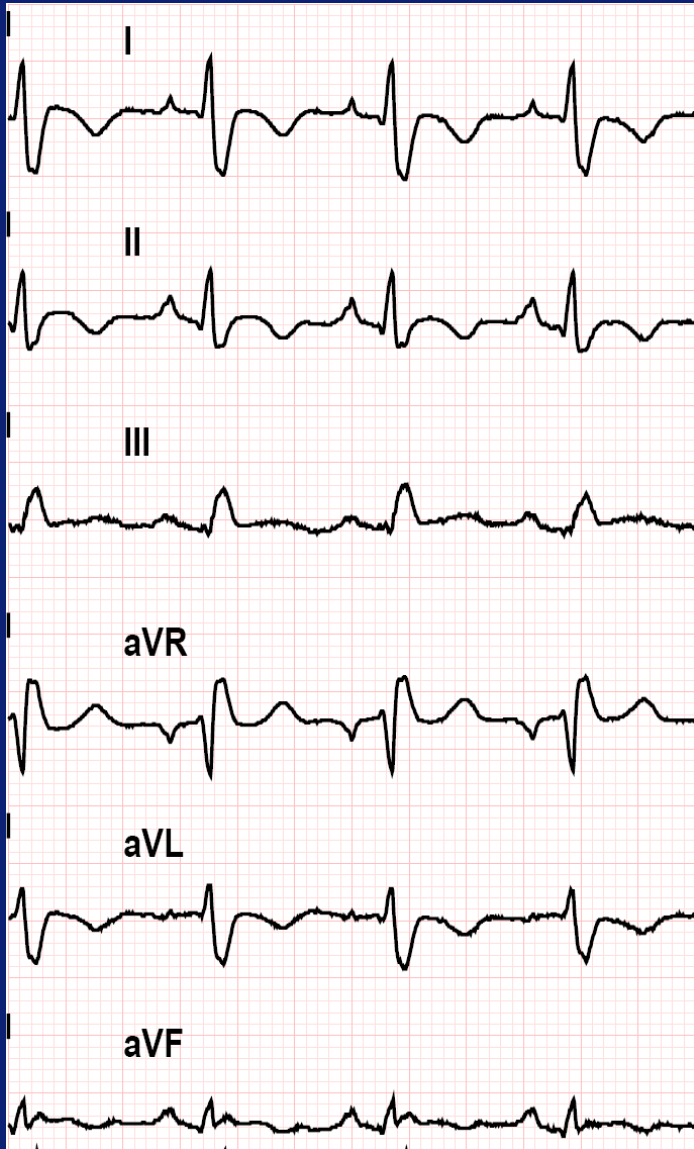
CK 36.792 (<200) U/l

CK-MB 156 U/l

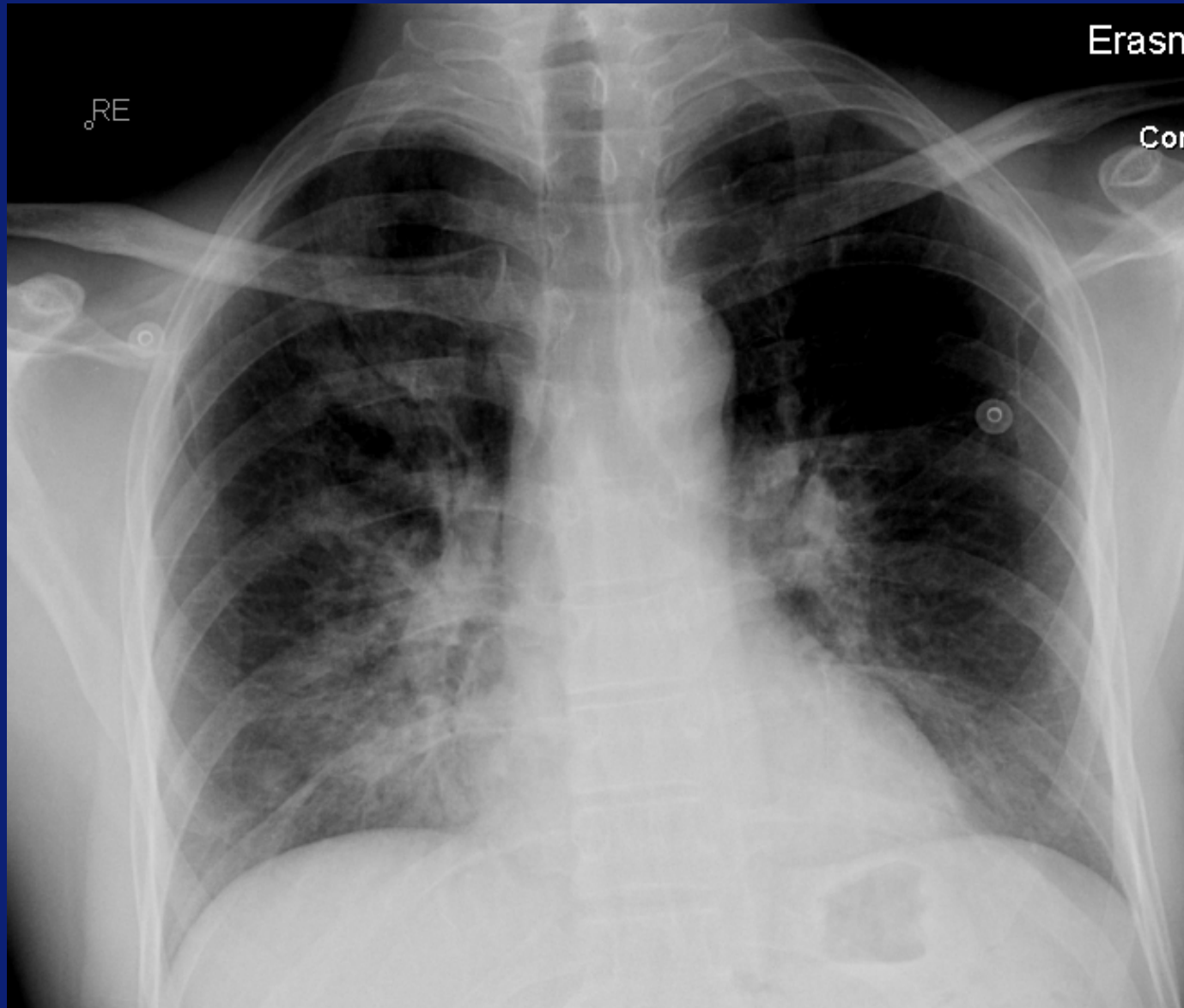
Troponin T 1.07 (<0.02) mcg/l

Myoglobine 2877 (<75) mcg/l

Electrocardiogram



Chest X-ray



Summary

42 year old male

History/ Recurring myocarditis

Presentation/ Nausea, vomiting, shock

C/

1. Rhabdomyolysis
2. Pulmonary infiltrate
3. Increased inflammatory markers
4. Increased troponins / change of ECG
4. Decreased renal function

Questions for the Audience

1. Differential diagnosis
2. Suggested diagnostic procedures
3. Possible therapeutic interventions

Clinical course

1. Treatment

- fluid resuscitation
- broad spectrum antibiotic (levofloxacin)

2. Outcome

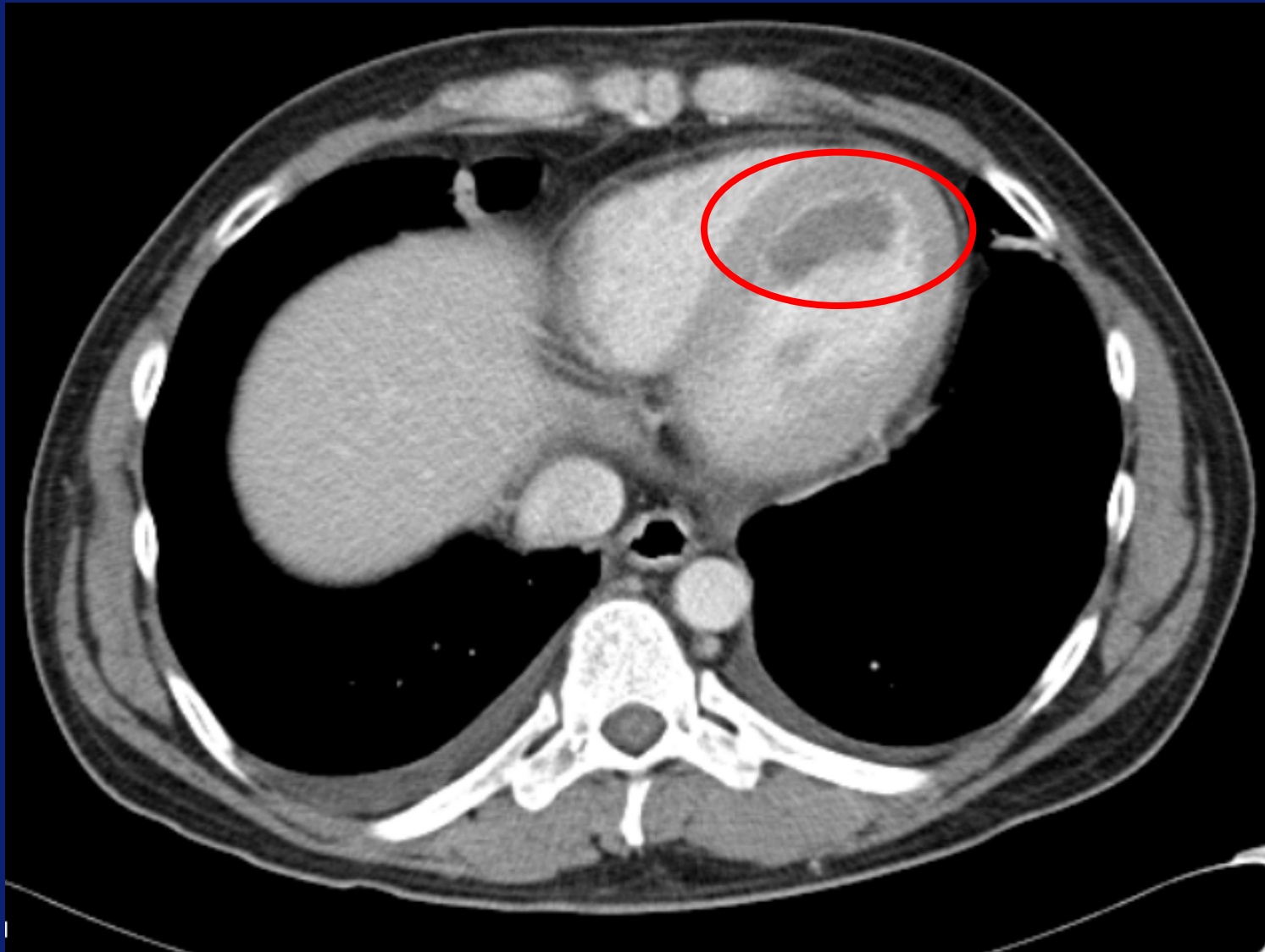
- regression of complaints within 2 days
- Improvement of creatine kinase, kidney function and inflammatory markers

Initial diagnostic tests

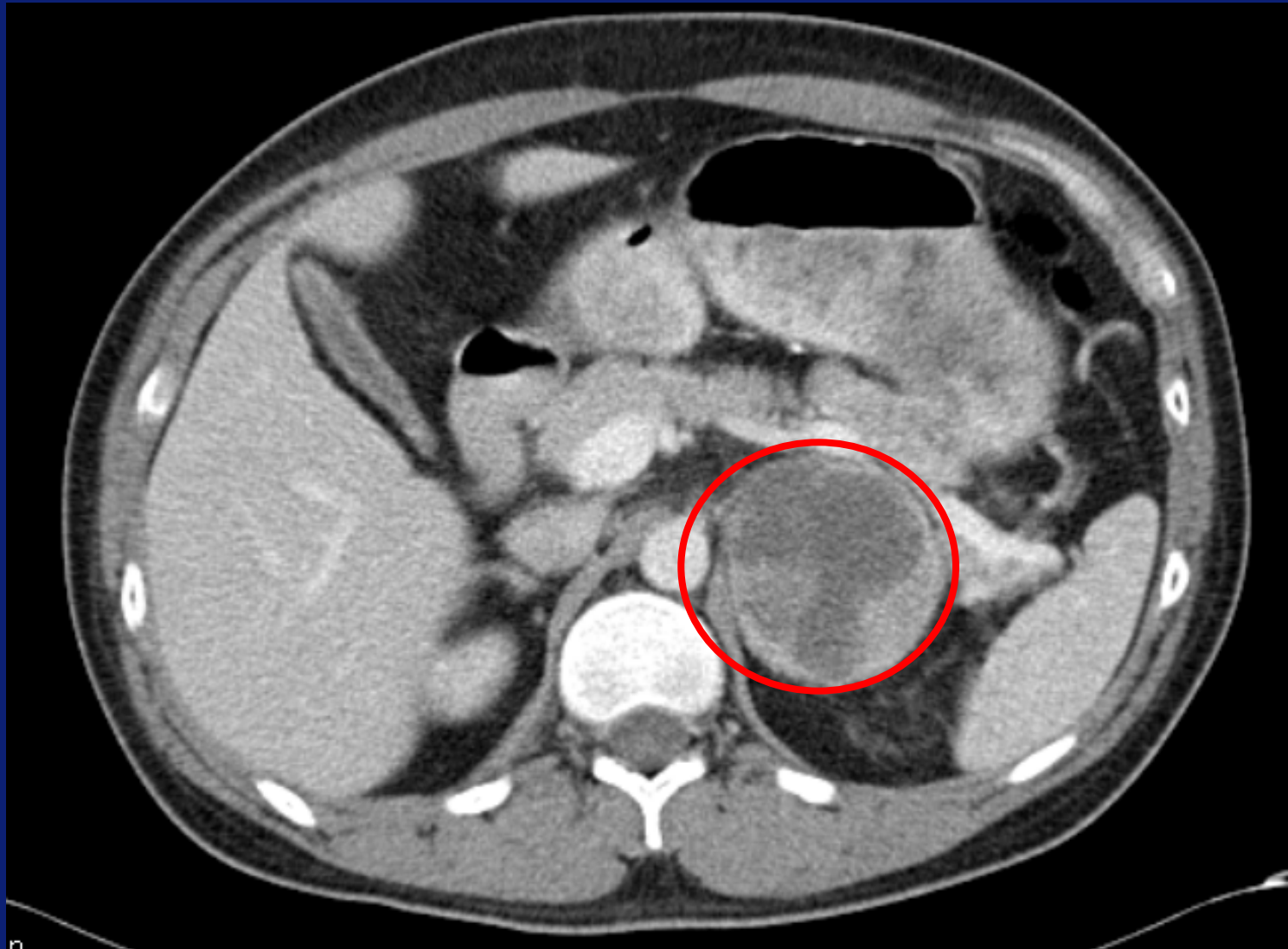
- A. Bacterial cultures
- B. Urinary antigen test for legionnaires' disease / pneumococcus
- C. Serologic tests for respiratory viral pathogens
- D. Antinuclear antibodies
- E. Antineutrophil cytoplasmic antibodies

C/ All negative

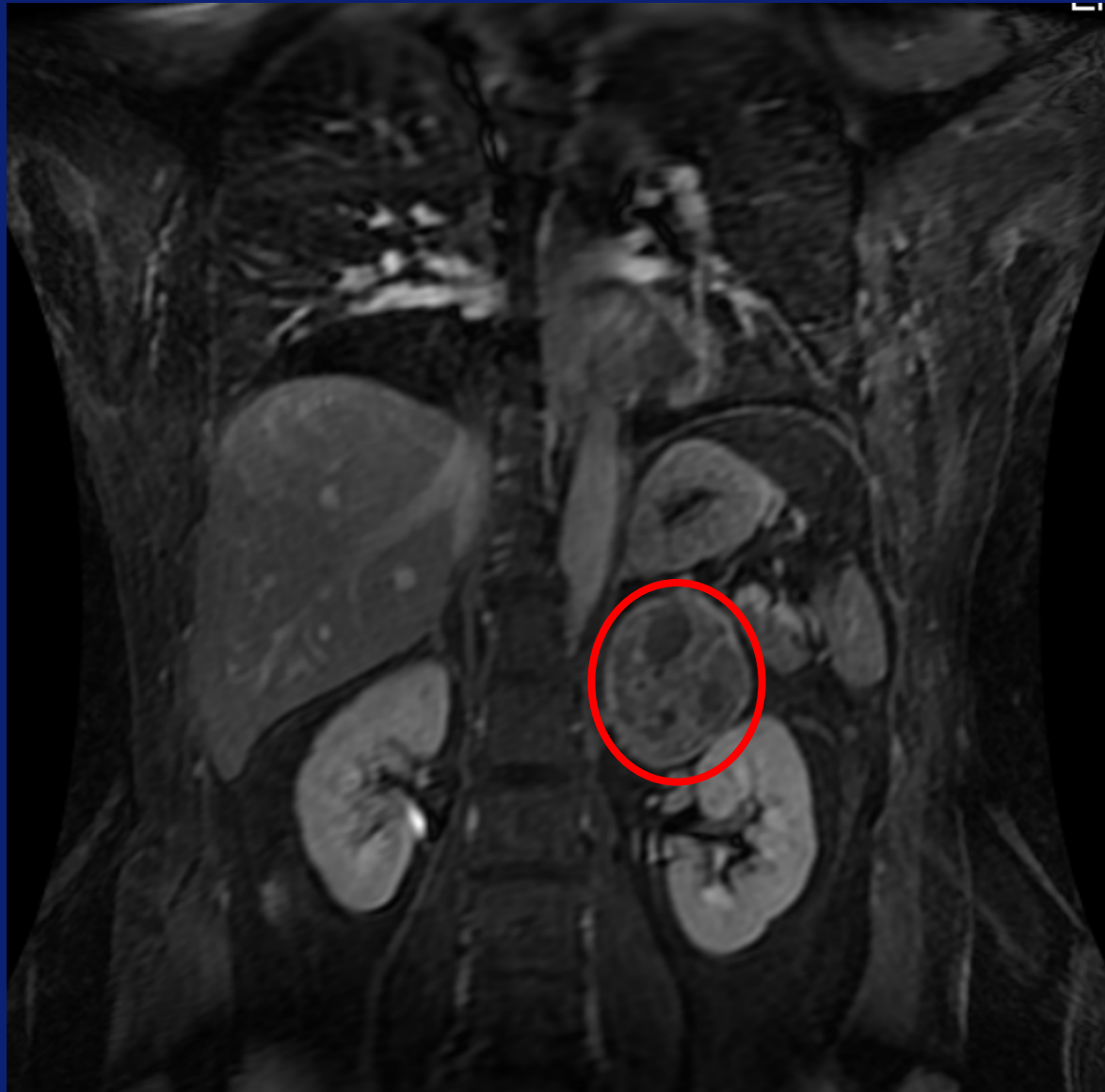
CT-scan chest



CT-scan abdomen



MRI abdomen



Differential diagnosis adrenal tumor

DD

Adrenocortical carcinoma

Pheochromocytoma

Metastasis

Adrenal cyst

Adrenal bleeding

Myelolipoma

Adrenal adenoma

Intracardiac mass

DD

Thrombus

Angiosarcoma

Rhabdomyosarcoma

Fibrosarcoma

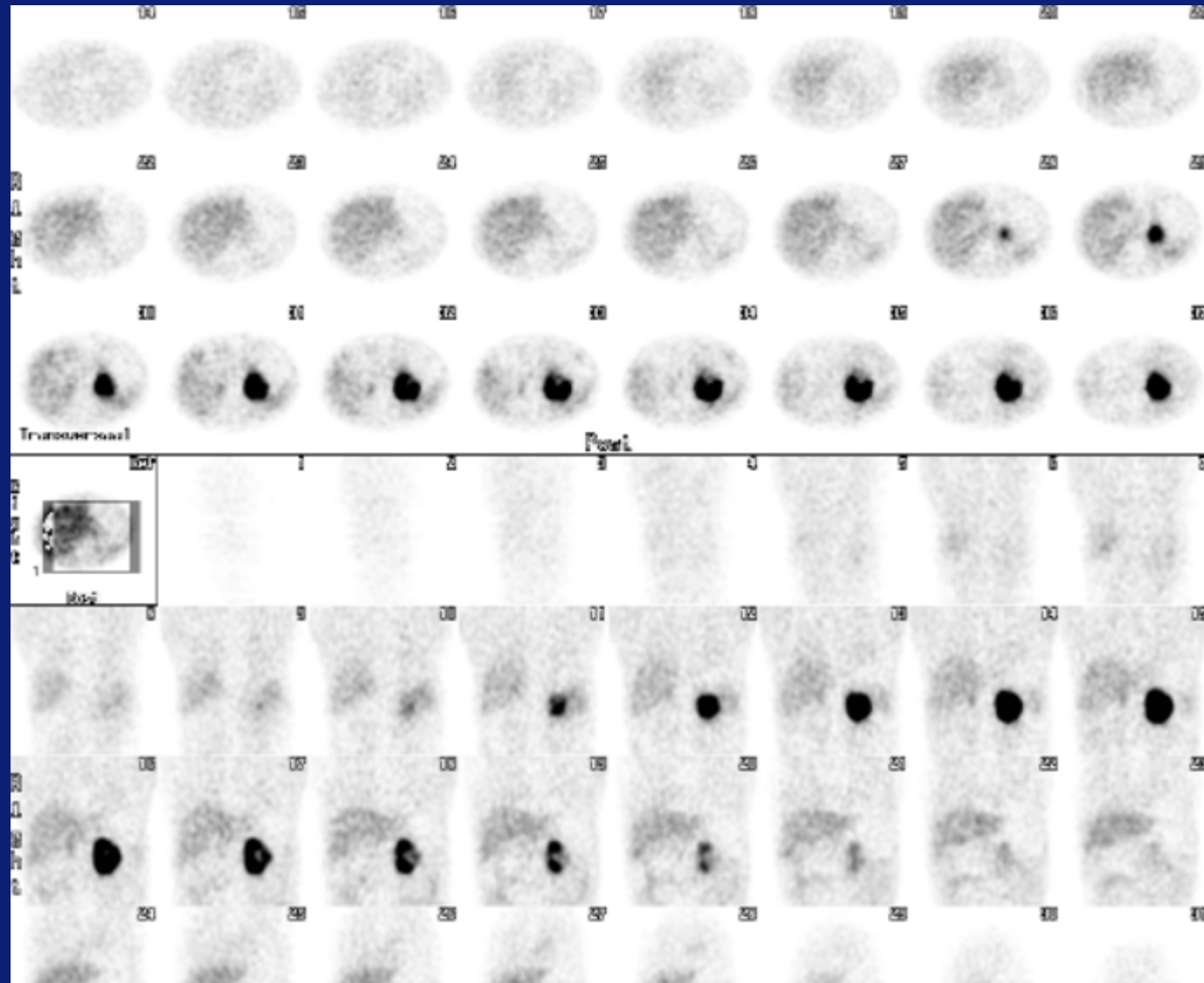
Leiomyosarcoma

Metastasis

Myxoma

Endocrinology

Normetanephrine urine	695	60-260 $\mu\text{mol/mol}$ kreat
Metanephrin urine	5776	35–150 $\mu\text{mol/mol}$ kreat
Noradrenalin serum	519	100-600 pg/ml
Adrenalin serum	227	<120 pg/ml
Cortisol nuchter	452 nmol/l	200 - 800 nmol/l
24-hr urinary cortisol	288 nmol/24 hr	<850 nmol/24 hr
Estradiol	145 pmol/l	50-200 pmol/l
DHEA	18.6 nmol/l	2.5-25.0 nmol/l



Diagnosis

Pathology

- chromogranin A positive tumour
- hyperchromasia, nuclear pleomorphism (PASS 2)

Conclusion

- pheochromocytoma
- intracardiac thrombus, myocarditis
- rhabdomyolysis

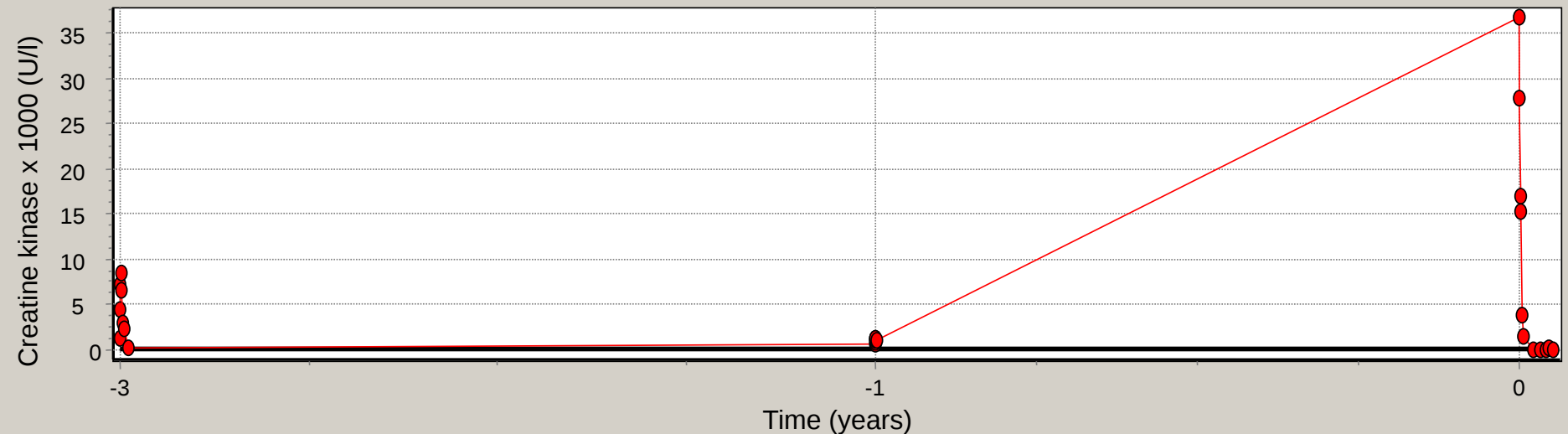
Follow-up

- No MEN IIA/B, von Hippel Lindau, neurofibromatosis type I or SDHB/D
- No recurrence of complaints or increased catecholamines

Take home message

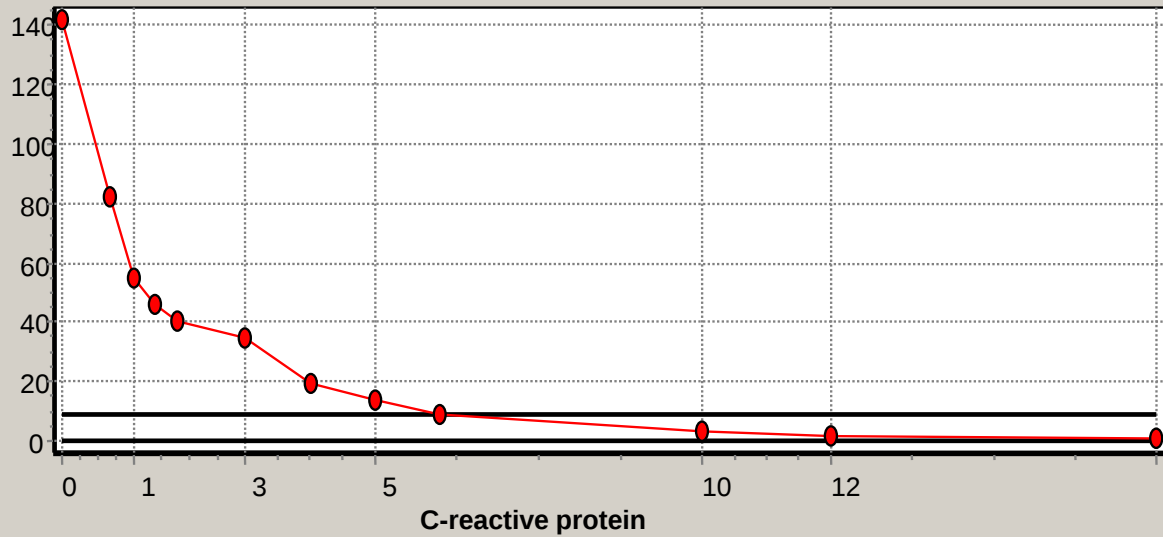
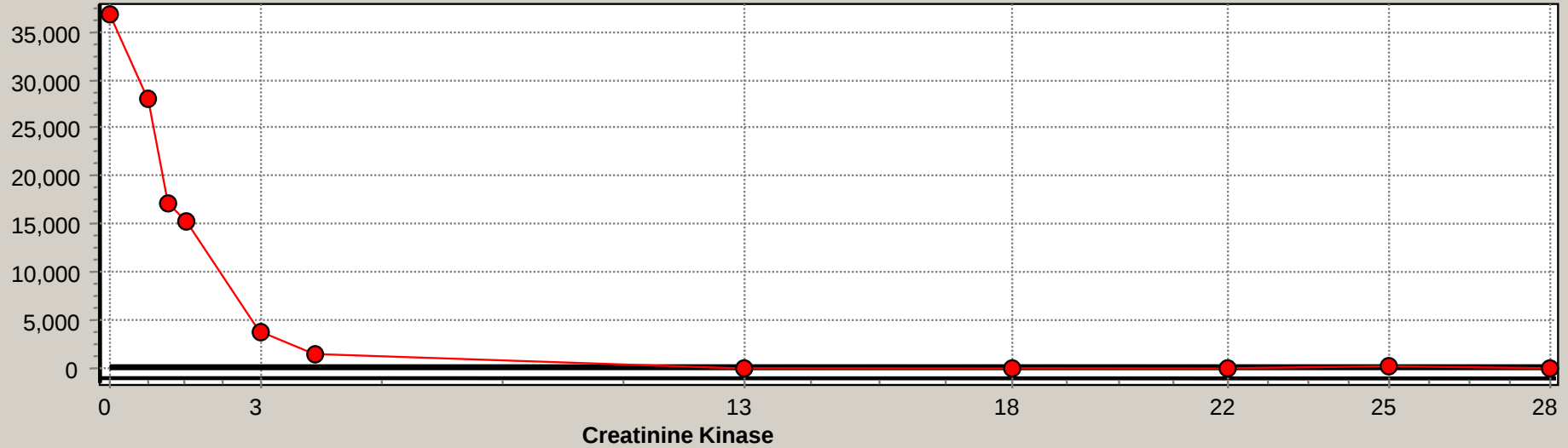
Recurrent myocarditis or rhabdomyolysis, think of pheochromocytoma

Both hypertension and hypotension can be symptoms of pheochromocytoma

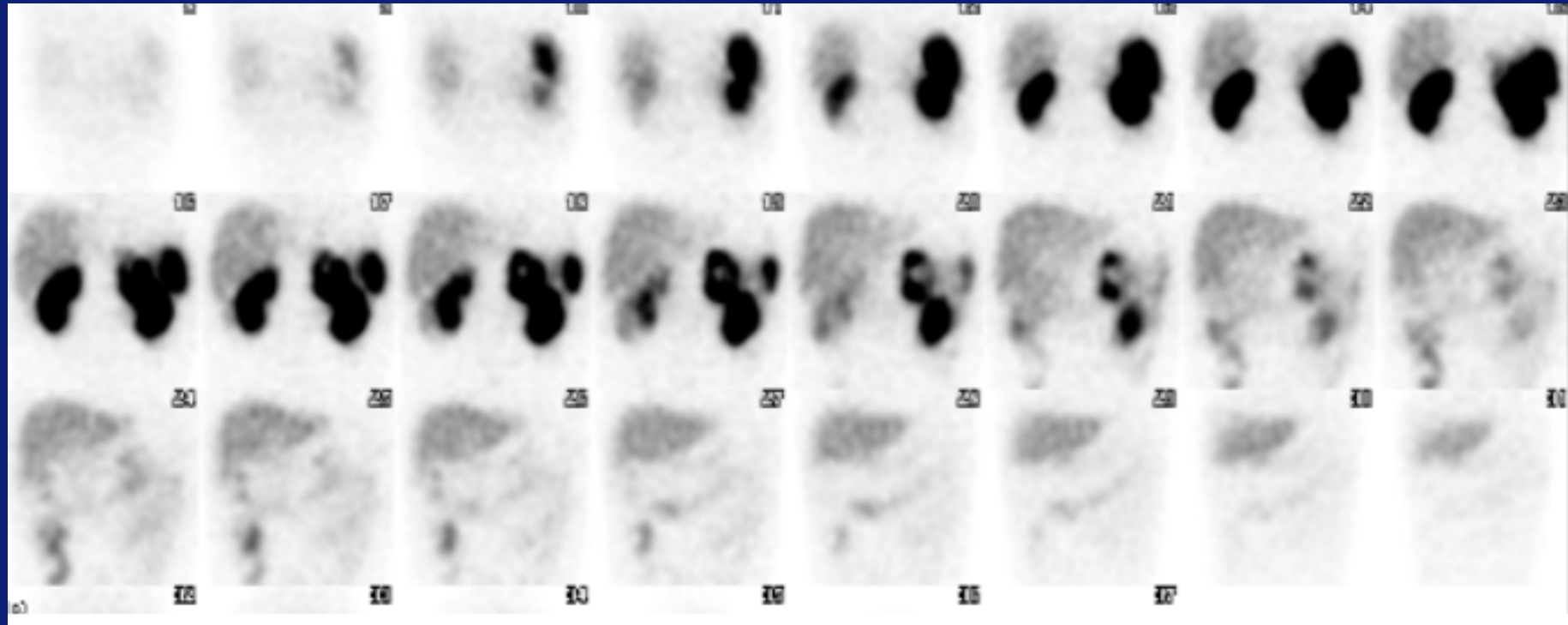


Thank you for your attention!





SMS



Adrenal tumor & Intracardiac mass

DD

Carney complex

Autosomal dominant disease

Atrial myxoma

Extracardial myxoma / schwannoma

Testicular, adrenal, hypofyse, thyroid tumor

