Waiting for a diagnosis

Shirley Rigby

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Shirley Rigby

Consultant General Internal Medicine

Warwick Hospital

Warwick Medical School

Shirley.rigby@swft.nhs.uk

Mortality & Morbidity 1 Introduction

Internal medicine case

Brief introduction to the case

Work through it with your group

Final discussion

History

Admitted Internal Medicine

Unwell for 2 months

Intermittent fevers

Weight loss of 17kg over 8 weeks

Buttock/back pain-diffuse

Mr B: Further history

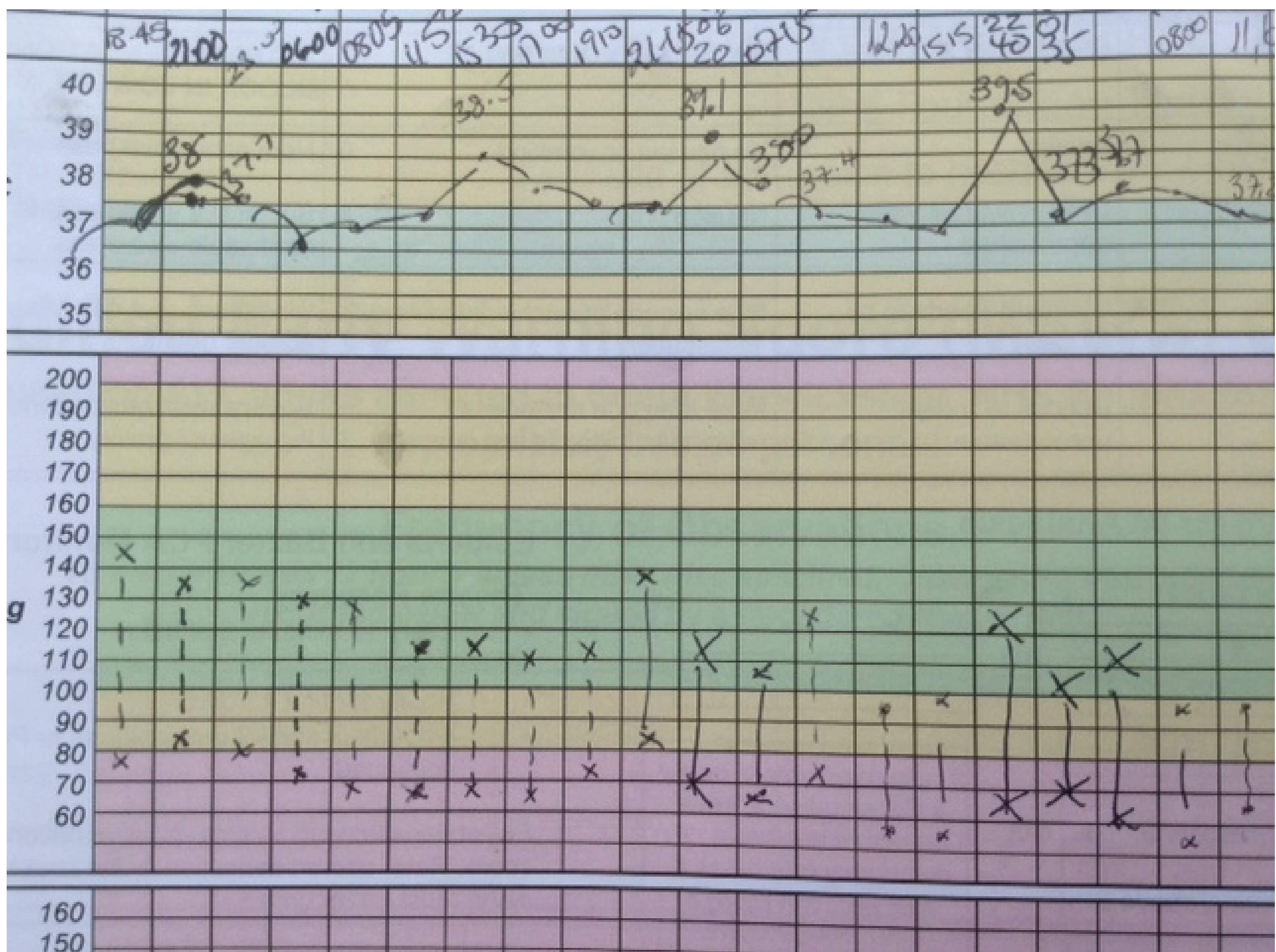
Past Medical History:
COPD
Investigated for pulmonary TB in 2008-negative
Recent episode of testicular pain-epididymo-orchitis

Drug History: Salbutamol inhaler, no allergies

Social History: White, born UK, lives in a town, with wife
No recent travel outside UK
Ex-smoker, 30/day for 30 years
Alcohol <10u per week

On examination

White male
Cachectic 46 kg, BMI 17 kg/m^2 (>18.5)
Fluctuating pyrexia T 38.5 C
Cardiovascular/Respiratory/Abdominal/
neurological systems all normal
No lymphadenopathy
Joints/spine normal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150

Initial Investigations

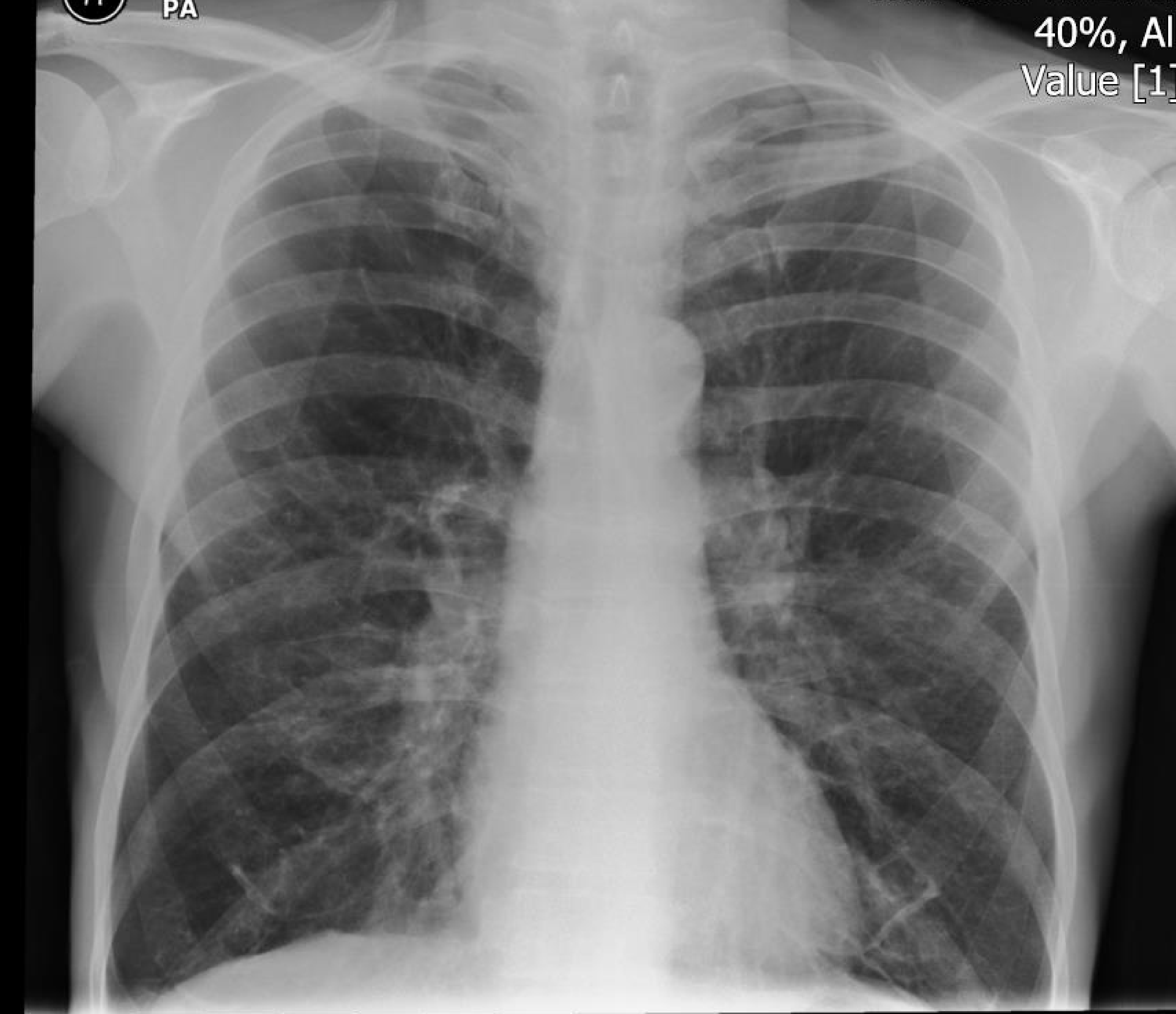
Hb	106	g/L	(130-170)	↓
MCV	80	fl	(80-100)	
wbc	29	x 10^9/L	(4-11)	↑
Neut	26.8	x 10^9/L	(2-7)	↑
Plt	912	x 10^9/L	(140-400)	↑
CRP	260	mg/L	(<11)	↑
PV	2.22	mPa.s	(1.5-1,72)	↑

Initial Investigations

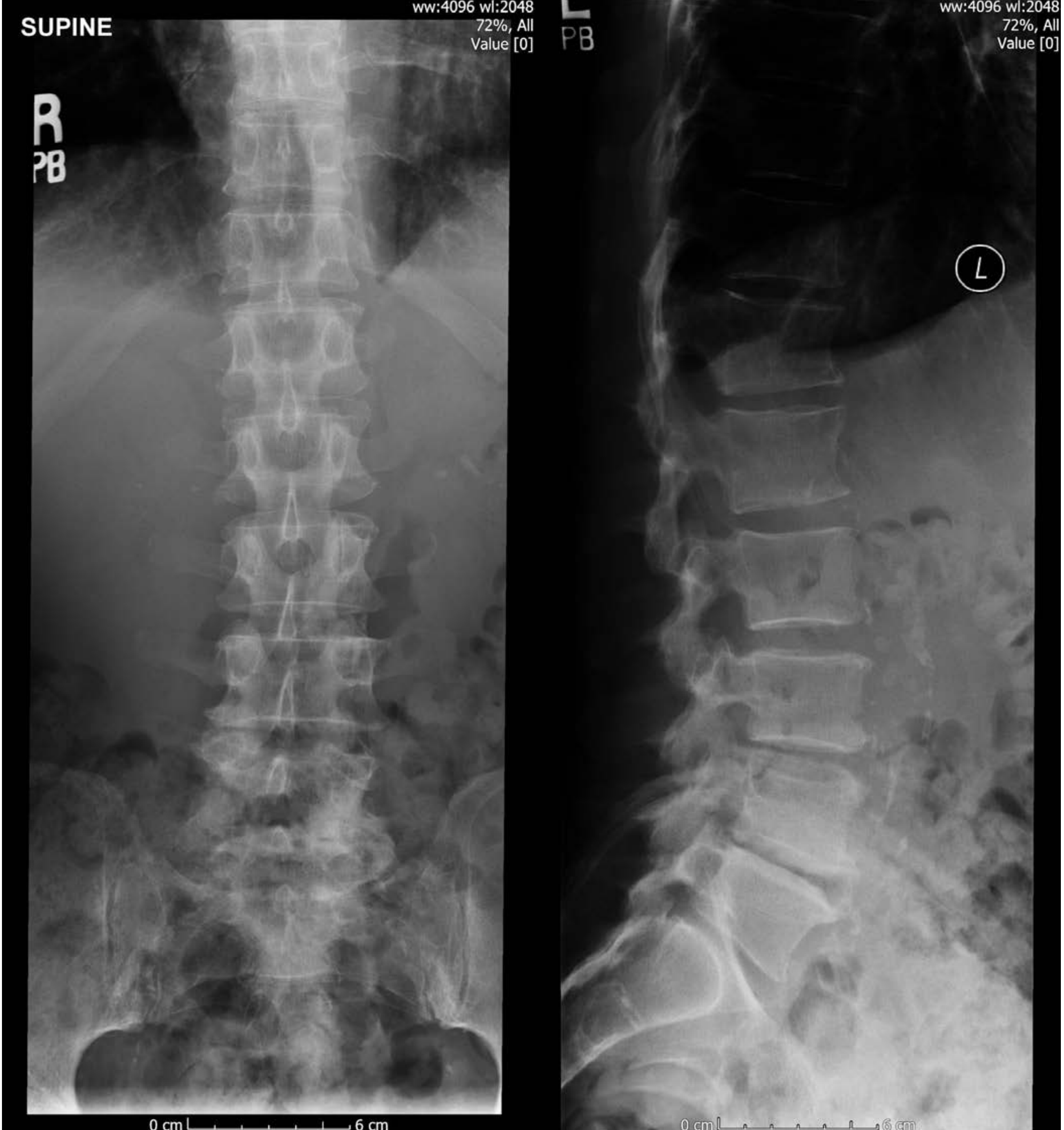
Sodium	133	mmol/L	(133-146)
Potassium	4.3	mmol/L	(3.5-5.5)
Creatinine	54	umol/L	(65-105)
Albumin	23	g/L	(35-50)
Bilirubin	7	umol/L	(4-25)
Alk Phos	167	U/L	(40-130)
ALT	40	U/L	(10-50)
Calcium	2.37	mmol/L	(2.2-2.6)

m

cm



X ray
Lumbar
spine



Group work

Imagine you are the resident looking after this patient

1. What is the differential diagnosis?
2. What further investigations would you arrange?
3. What treatment would you start?

Silo Mentality

Each person sits inside their own silo
Failure to problem solve across broad boundaries

Patient Harm

1. Multiple unnecessary treatments and investigations
2. Iatrogenic infection-C. Difficile
3. Psychological- patient still has bad dreams, doesn’t want to go back into hospital again

Systems/Organisational errors

6 weeks of cost of hospital in-patient care

Cost of all investigations

Unnecessary ward moves

This case argues for all patients to be under a supervising physician practising internal medicine

Diagnostic errors- clinical problem solving

'The most important predictor of successful problem solving is the quality of the hypotheses that are generated early in the process. Once generated, a correct diagnosis is hardly ever rejected, but the case will not be solved if this process fails'

Custers et al, Clinical problem analysis: a systematic approach to teaching complex medical problem solving. Acad Med 2000

Avoiding diagnostic errors

Pattern recognition vs analytical reasoning

Pattern recognition- take a shortcut, easy, you've seen it before, you know what it is

If you are faced with a situation where you don't know what is going on-slow down, avoid short cuts, switch to analytical reasoning

Analytical reasoning

‘Thinking slow’

Use frameworks to explore all avenues

Discuss the case with colleagues/grand rounds

A framework to prompt analytical problem solving

V
I
T
A
M
I
N

Rigby et al, Student BMJ 2008

A framework to prompt analytical problem solving

V	Vascular
I	Infection-bacterial, viral, other
T	Trauma/injury
A	Autoimmune/inflammatory
M	Metabolic/endocrine
I	Iatrogenic/Medicines
N	Neoplasia-benign, malignant

- Rigby et al, Student BMJ 2008