ConnectED
STRONG CONNECTIONS GIANT GAINS

CENNZ 2018

THE 27TH ANNUAL COLLEGE OF EMERGENCY NURSES NEW ZEALAND CONFERENCE

NAPIER CONFERENCE CENTRE

26-27 October 2018, Hawke's Bay

Bias in our Thinking

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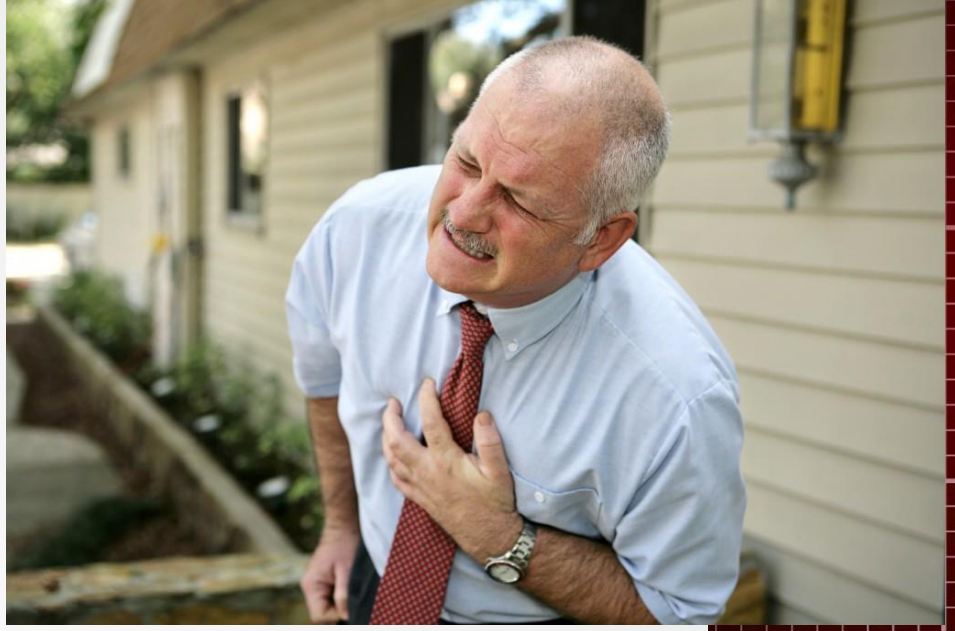
CHRISTCHURCH HOSPITAL

Diagnostic Failure Risk Factors

- Fatigue
- Sleep deprivation
- Cognitive overload

Case

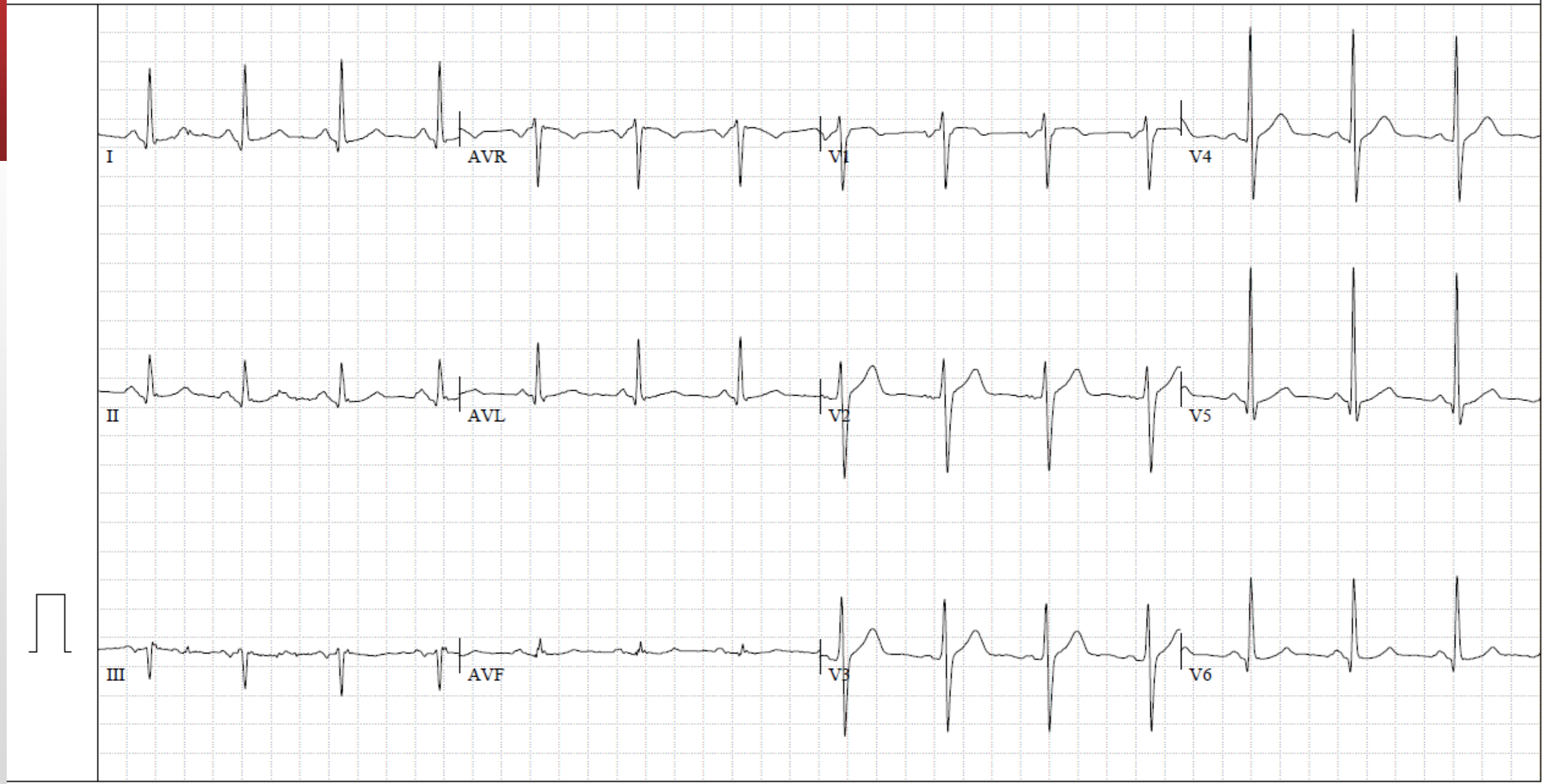


Thinking about Chest Pain

Case

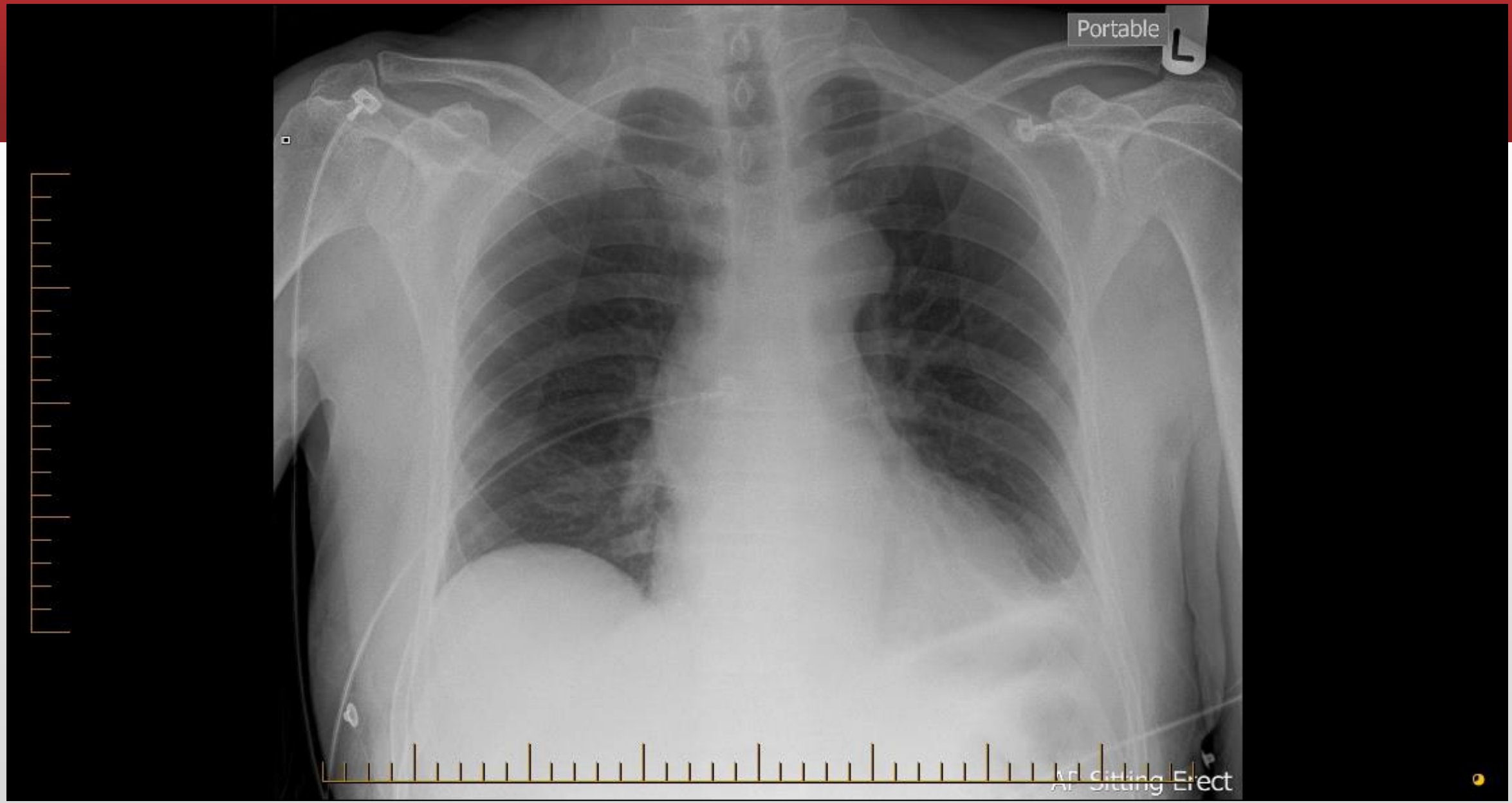
Male, 65

- Central chest pain
  - Onset 0200
  - Retrosternal
  - No radiation
  - Worse on deep inspiration
- No SOB/collapse/palpitations



GE CS MAC55 009B.1 Unconfirmed

25mm/s 10mm/mV 100Hz 12SL V21 Attending MD:


Portable
L
AP Sitting Erect

Clues


NDC 10019-037-39
Fentanyl
Citrate Injection, USP
C II
2500 mcg/50 mL
PRESERVATIVE-FREE
50 mcg/mL (0.05 mg/mL)
℞ only
FOR SLOW INTRAVENOUS USE
by hospital personnel specifically trained
in the use of narcotic analgesics.
50 mL Single Dose Vi
Baxter
Baxter Healthcare Corporation
USA


PVC
0
78/41
94
Pulse
30
99
37.4

Aortic Dissection

1. **Uncommon -> 2-3/100,000/yr**
   (ACS = 400/100,000/yr)
2. **Deadly - 1-2%/hr**
   Acute Type A mortality = 50% in the first 48 hours if not operated
   90% 1 month mortality
3. **Difficult to diagnose**
   it is '*almost the standard of care to miss this diagnosis*'
   John Elefteriades (chief of CT surgery at Yale)
   38% missed on initial evaluation
   28% only diagnosed at autopsy

Acad. Med. 2003;78:775–780.

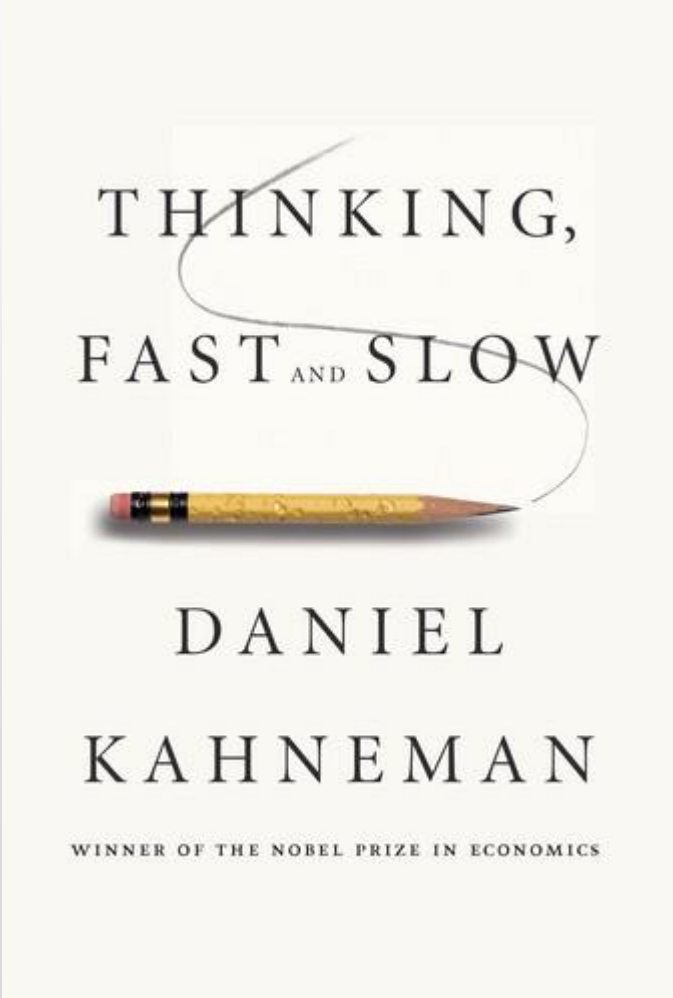
The Importance of Cognitive Errors in Diagnosis and Strategies to Minimize Them

Pat Croskerry, MD, PhD

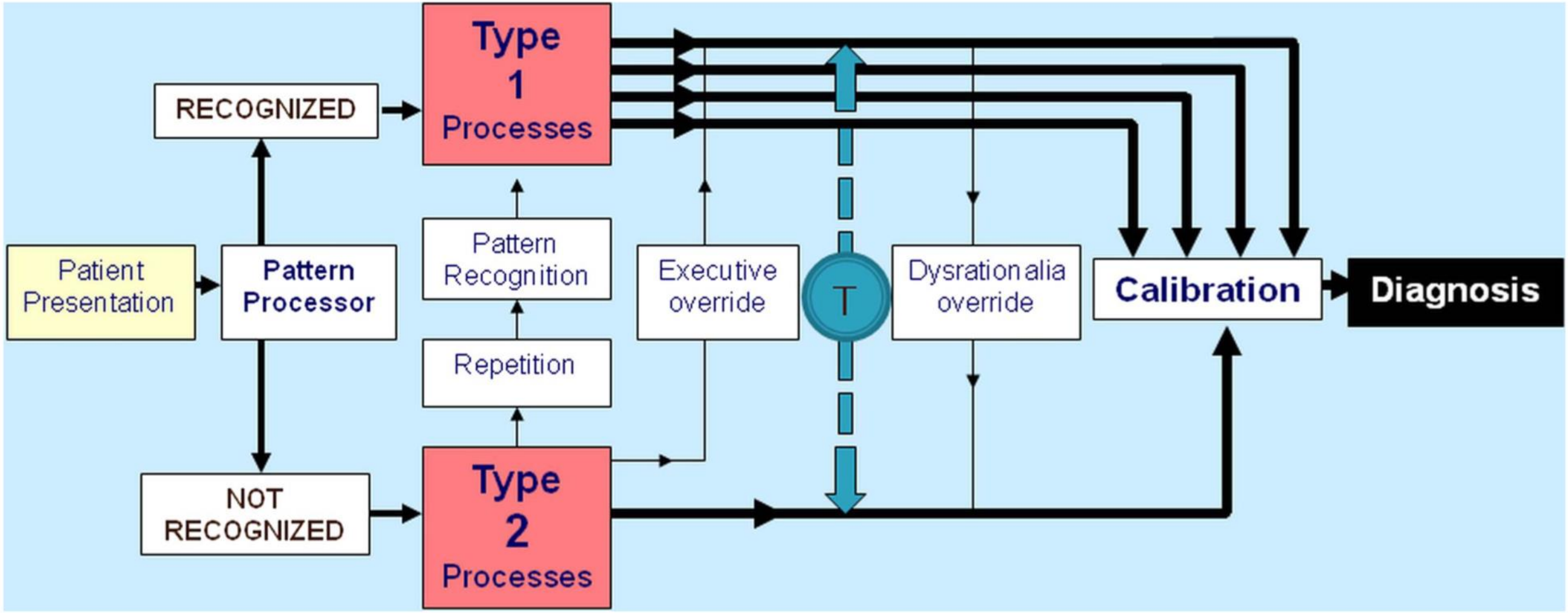
Why do we make diagnostic errors?

- Availability
- Anchoring
- Confirmation Bias
- Premature Closure
- Representiveness Restraint

How do we make a diagnosis



How do we make a diagnosis



A Universal Model of Diagnostic Reasoning

Pat Croskerry, MD, PhD

Acad Med. 2009; 84:1022–1028.

H…resent?

Table 4 Main clinical presentations and complications of patients with acute aortic dissection

	Type A	Type B
Chest pain	80%	70%
Back pain	40%	70%
Abrupt onset of pain	85%	85%
Migrating pain	<15%	20%
Aortic regurgitation	40–75%	N/A
Cardiac tamponade	<20%	N/A
Myocardial ischaemia or infarction	10–15%	10%
Heart failure	<10%	<5%
Pleural effusion	15%	20%
Syncope	15%	<5%
Major neurological deficit (coma/stroke)	<10%	<5%
Spinal cord injury	<1%	NR
Mesenteric ischaemia	<5%	NR
Acute renal failure	<20%	10%
Lower limb ischaemia	<10%	<10%

NR = not reported; NA = not applicable. Percentages are approximated.

"Classical" Presentation *is* Atypical

5 Tips to *reduce* your miss rate

Tip 1

Symptoms above and below the diaphragm

5 Tips to *reduce* your miss rate

Tip 2

The “chest pain and….” syndrome

Tip 3

Acute, Severe, *Unexplained* chest pain

5 Tips to *reduce* your miss rate

5 Tips to *reduce* your miss rate

Tip 5

The patient who “looks bad”

D-dimer

- 220 patients with initial suspicion of having acute aortic dissection
- Sensitivity 96.6% (95% CI, **90.3** to 99.3)
- Specificity was 46.6% (95% CI, 37.9 to 55.5)

Bedside USS

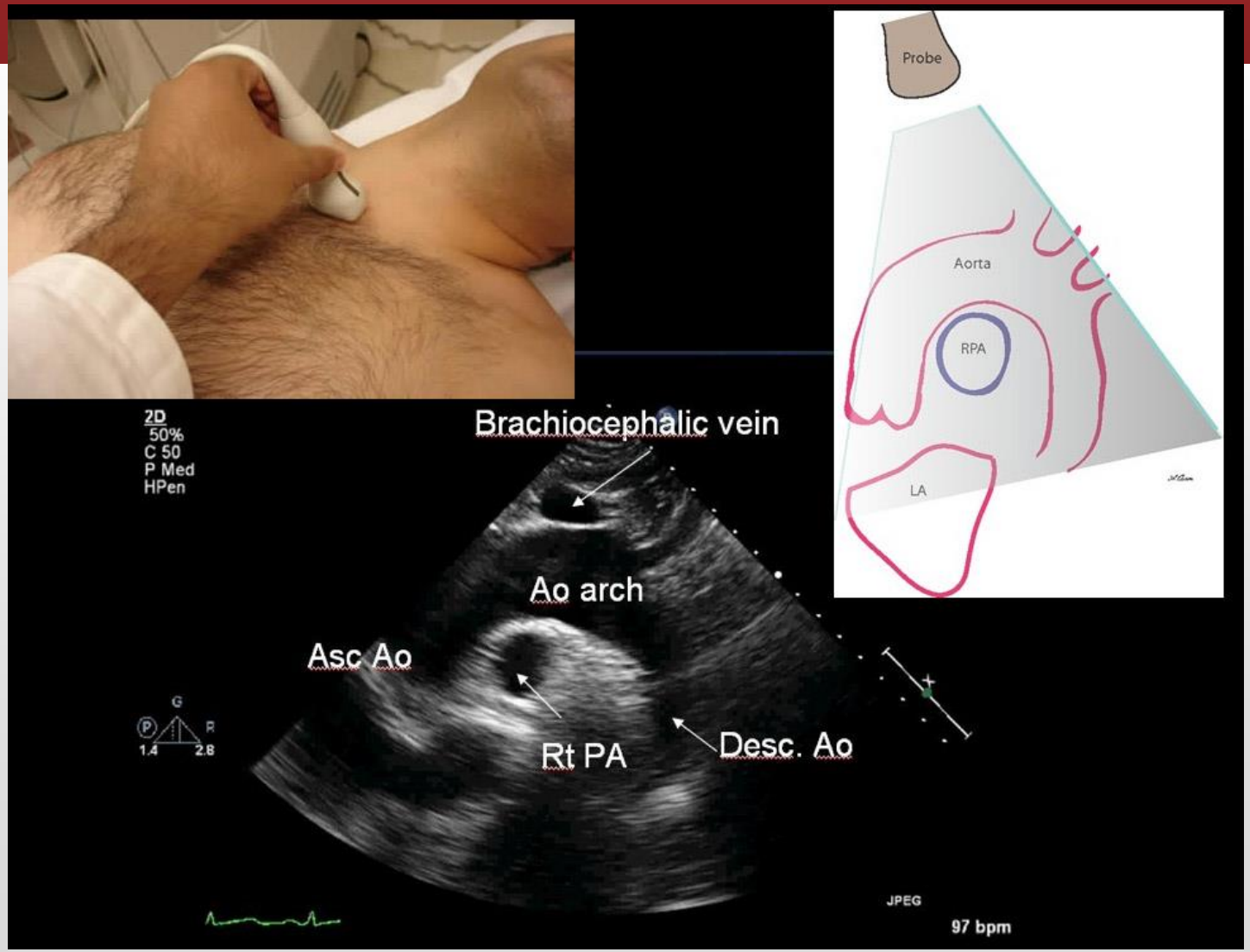


Image: http://echocardiographer.org/TTE.html

Case resolution

- Rx:
  - Fentanyl/Morphine
  - Labetalol
- Transferred to Wellington
- Surgery same day
- Discharged 5 days post-op

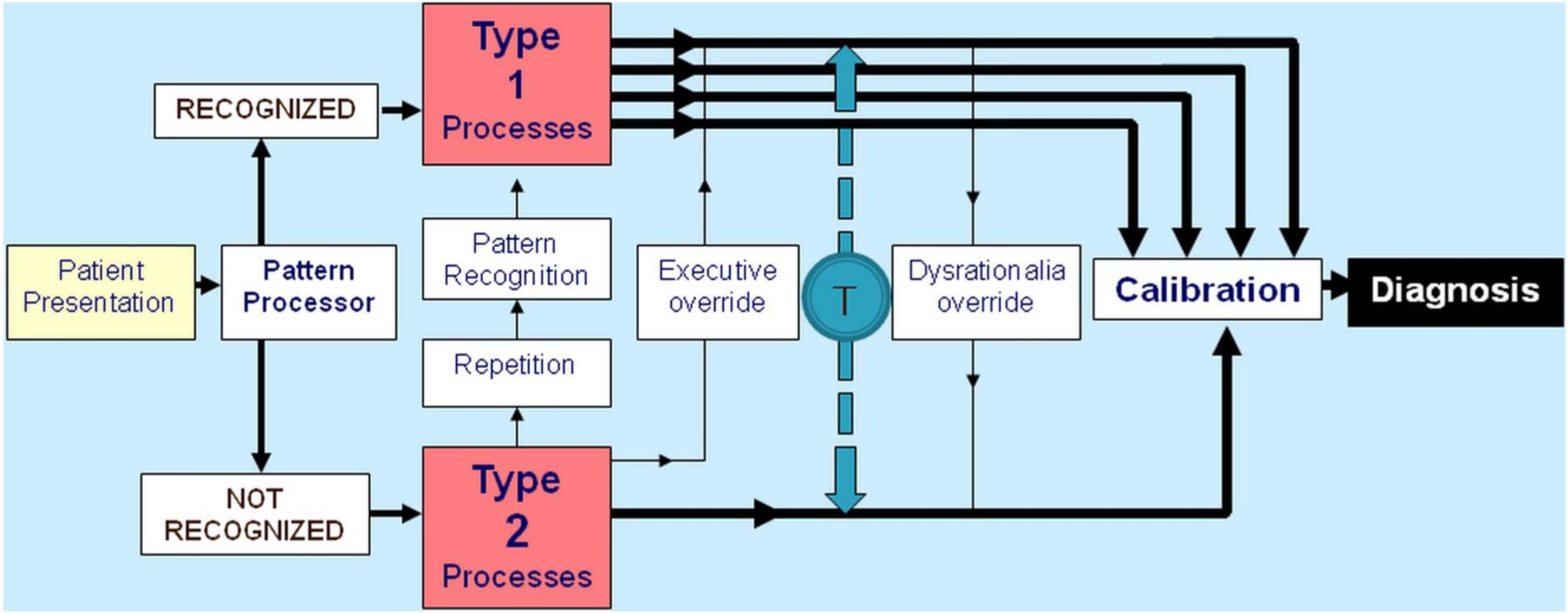
Summary

1. Chest pain = Aortic dissection
2. Don't CT every chest pain patient!
3. Be aware of your cognitive biases and develop strategies to check them
4. Have insight into your thinking

- Chest pain = ?aortic dissection
- Collapse = ?aortic dissection
- Back pain = ?aortic dissection
- Symptoms above and below diaphragm = ?aortic dissection

Diagnostic Processing

How do we make a diagnosis



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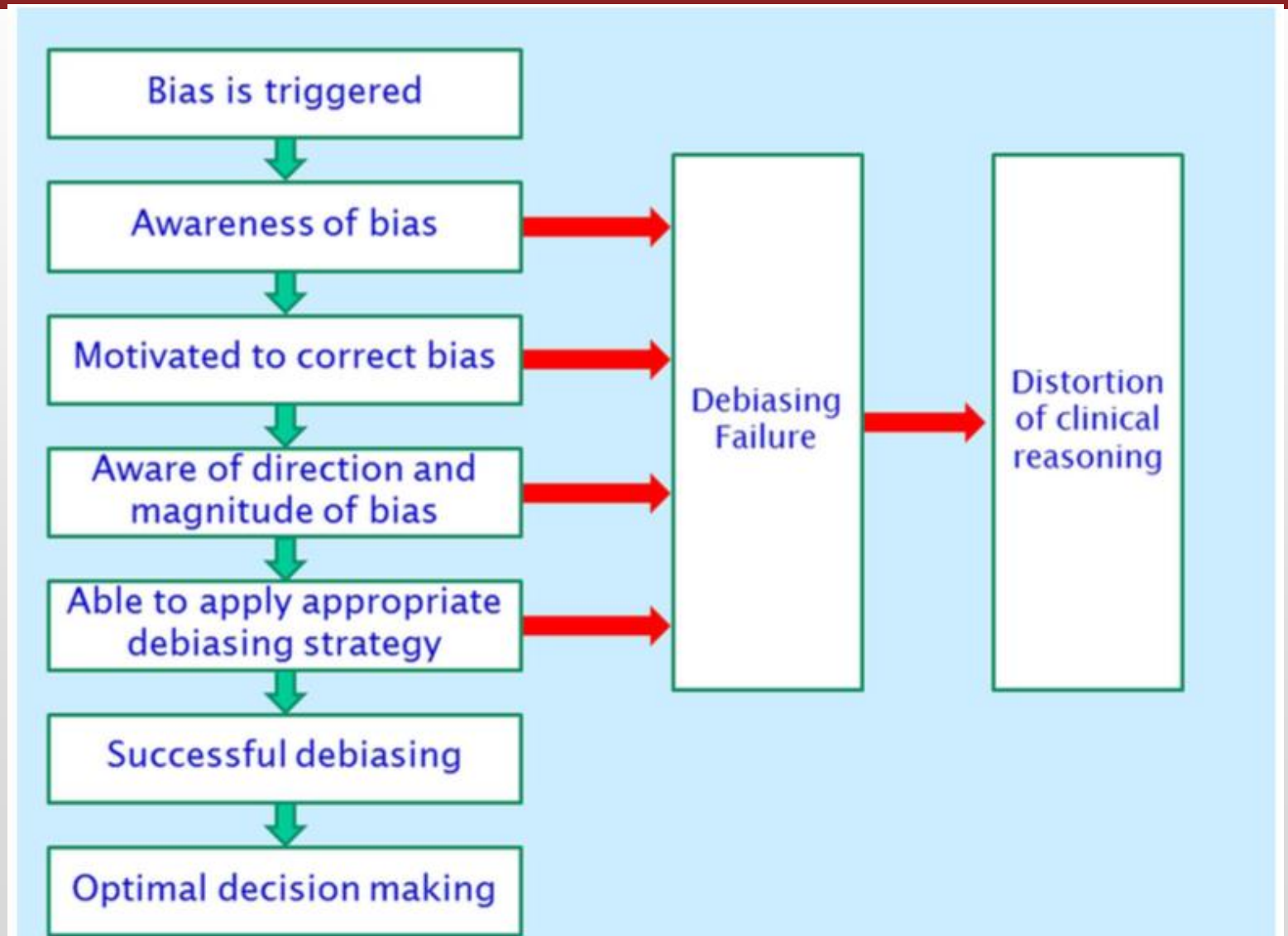
Debiasing

Successful Steps in Cognitive Debiasing



Case 1

Case 1

- 55 yr old male
- Constipation

Case 2

Case 2

- 19 yr old female
- Depression
- Anxiety

Quality of Decision Making Influenced by

- Ambient conditions
- Individual factors

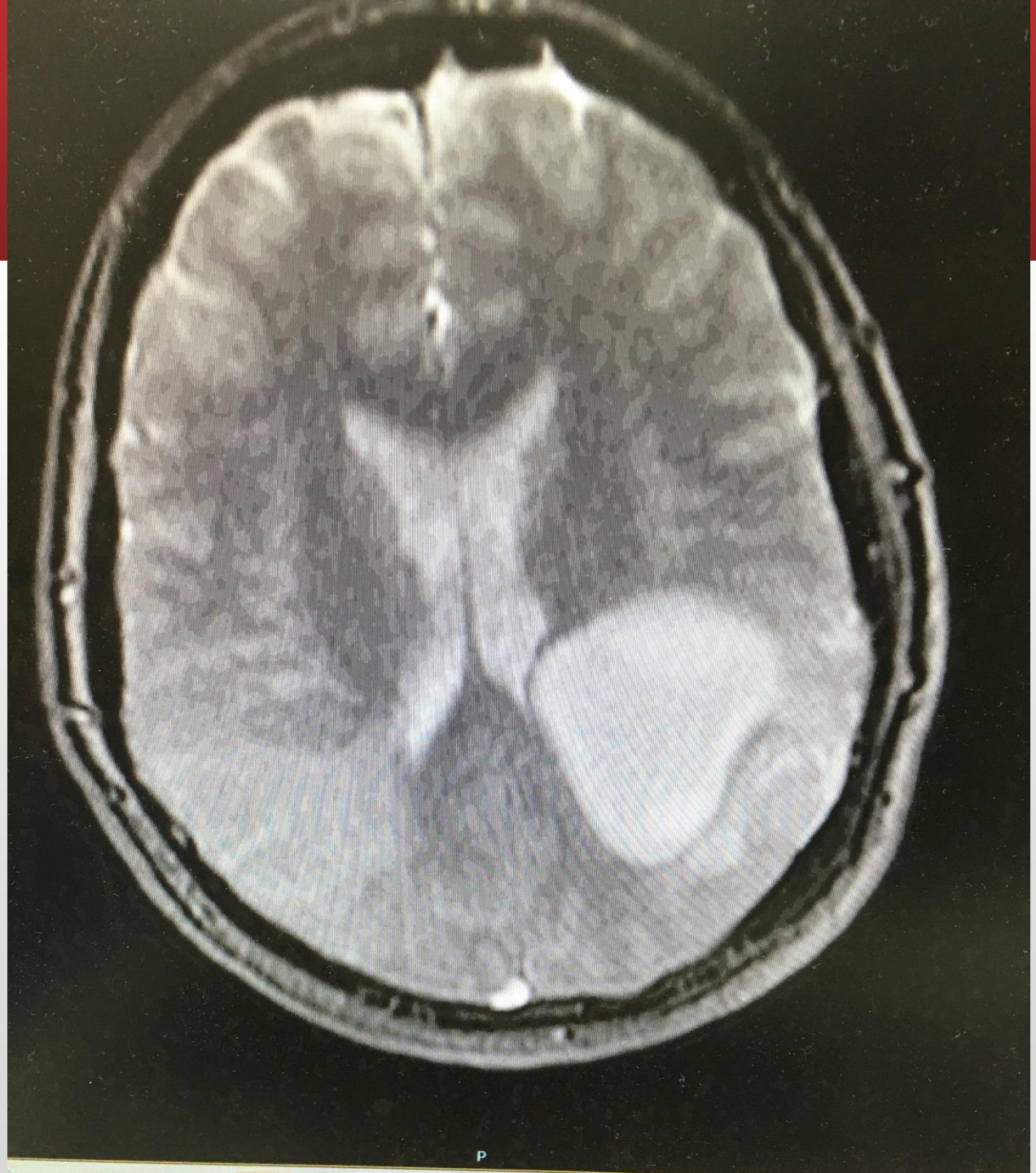
High Risk for Bias Situations

High-risk situation	Potential biases
1. Was this patient handed off to me from a previous shift?	Diagnosis momentum, framing
2. Was the diagnosis suggested to me by the patient, nurse or another physician?	Premature closure, framing bias
3. Did I just accept the first diagnosis that came to mind?	Anchoring, availability, search satisficing, premature closure
4. Did I consider other organ systems besides the obvious one?	Anchoring, search satisficing, premature closure
5. Is this a patient I don't like, or like too much, for some reason?	Affective bias
6. Have I been interrupted or distracted while evaluating this patient?	All biases
7. Am I feeling fatigued right now?	All biases
8. Did I sleep poorly last night?	All biases
9. Am I cognitively overloaded or overextended right now?	All biases
10. Am I stereotyping this patient?	Representative bias, affective bias, anchoring, fundamental attribution error, psych out error
11. Have I effectively ruled out must-not-miss diagnoses?	Overconfidence, anchoring, confirmation bias

Other Cases

Case 3

- 23 yr old male
- Odd behaviour
- Never really fit in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Case 4

Case 5


THE
EMERGENCY
DEPARTMENT
PLEASE DO NOT
REMOVE

Case 6

Case 7

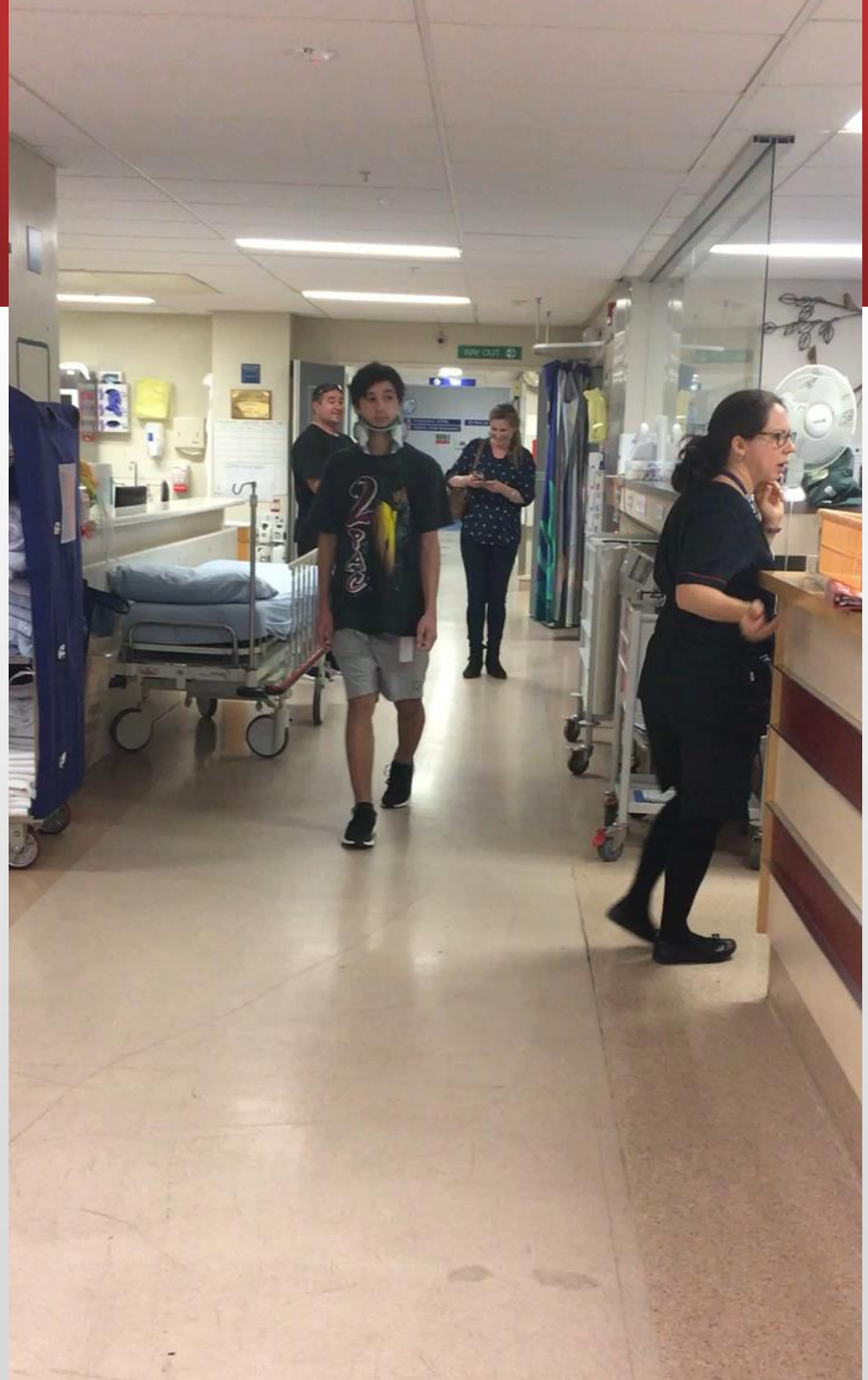
Summary

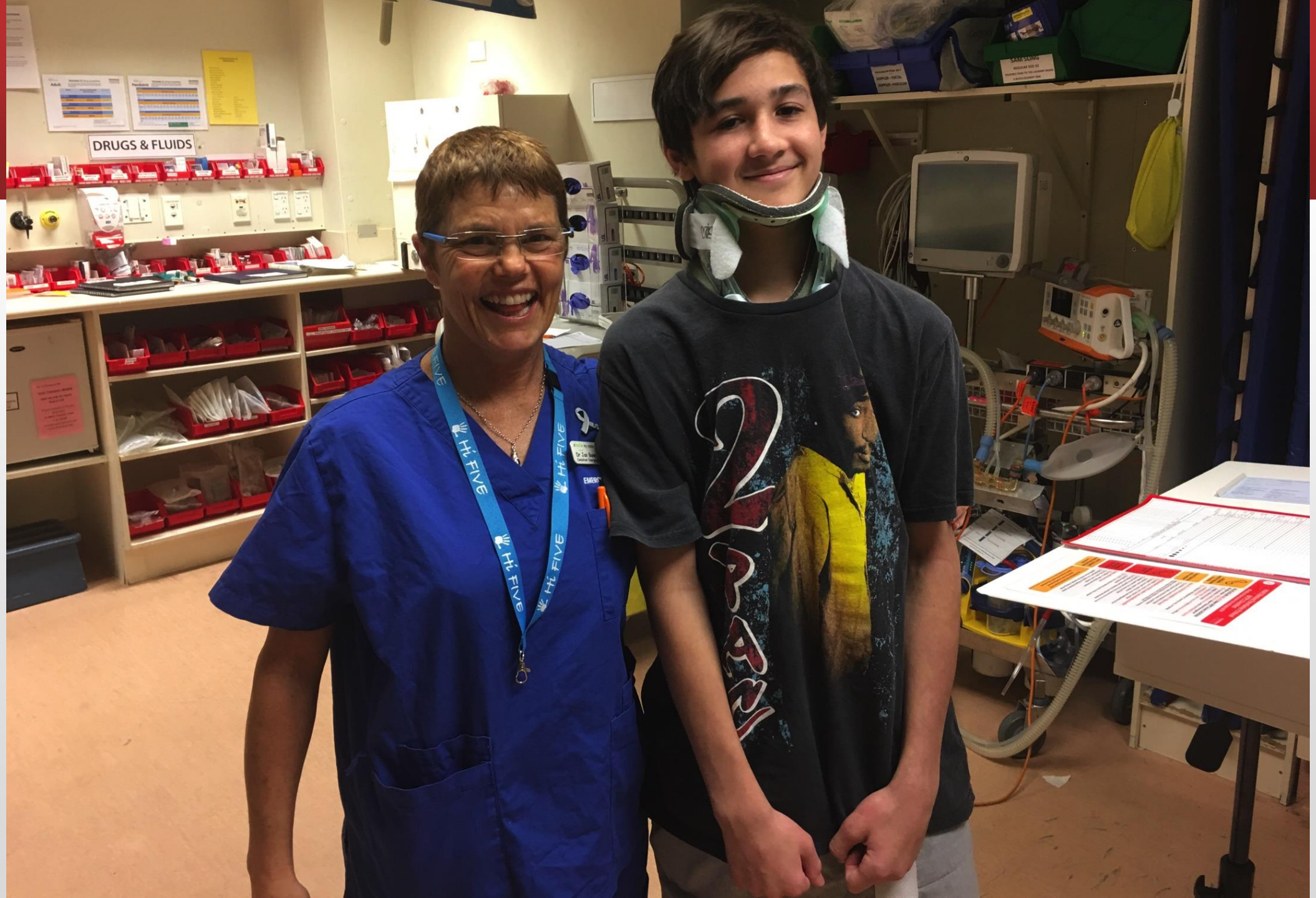
- Bias is common
- Types of processing
  - Type 1 / Fast
  - Type 2 / Slow
- High risk bias situations
- Debiasing techniques

Case 8


X-ray C SPINE
MR MRI SPINE CER
CT CTA ARCH CARC
X-ray CHEST C SPINE
Show More
C3
C4
C5
Christchurch Hospital
Zoom: 26
Compression: 6:1 (lossless)
W: 494 L: 208
Data Source: direct to 172.30.8.248:5020 (unencrypted)


ER
HI FIVE
select




DRUGS & FLUIDS
Hi FIVE

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