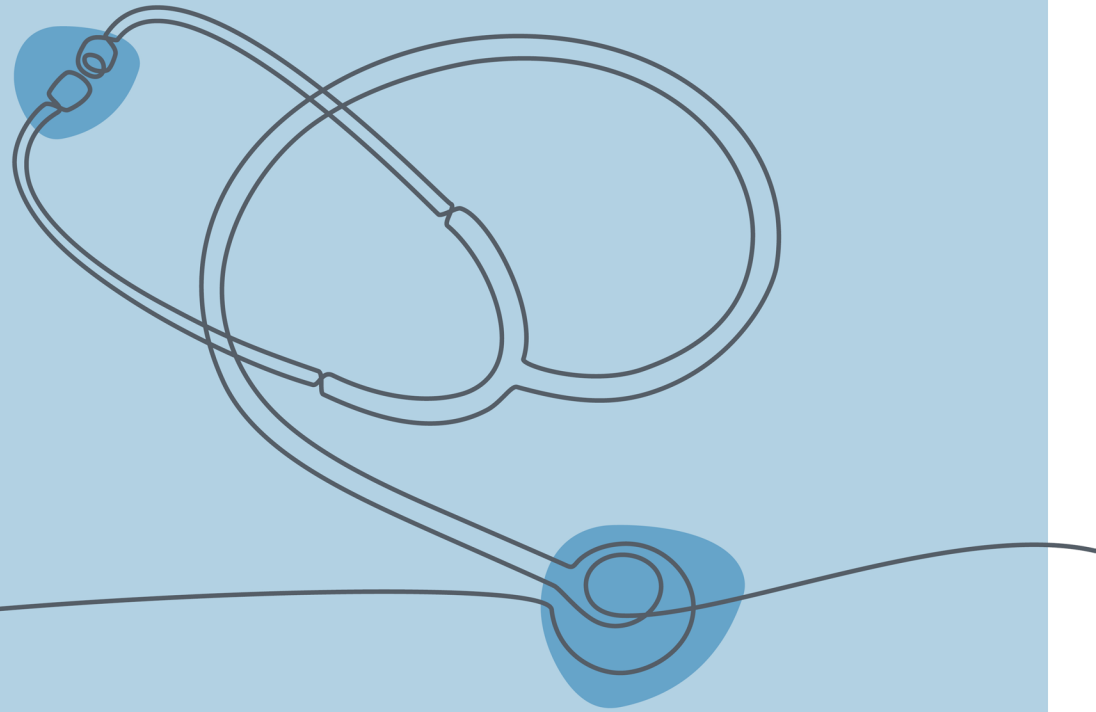
General Practice Liaison Officer Program presents

Championing Generalism Workshop



A collaborative, multi-disciplinary and multi-specialty learning opportunity for GPs covering conditions commonly managed in primary care

CASE STUDIES

SATURDAY 8 JUNE 2024 | CSDS

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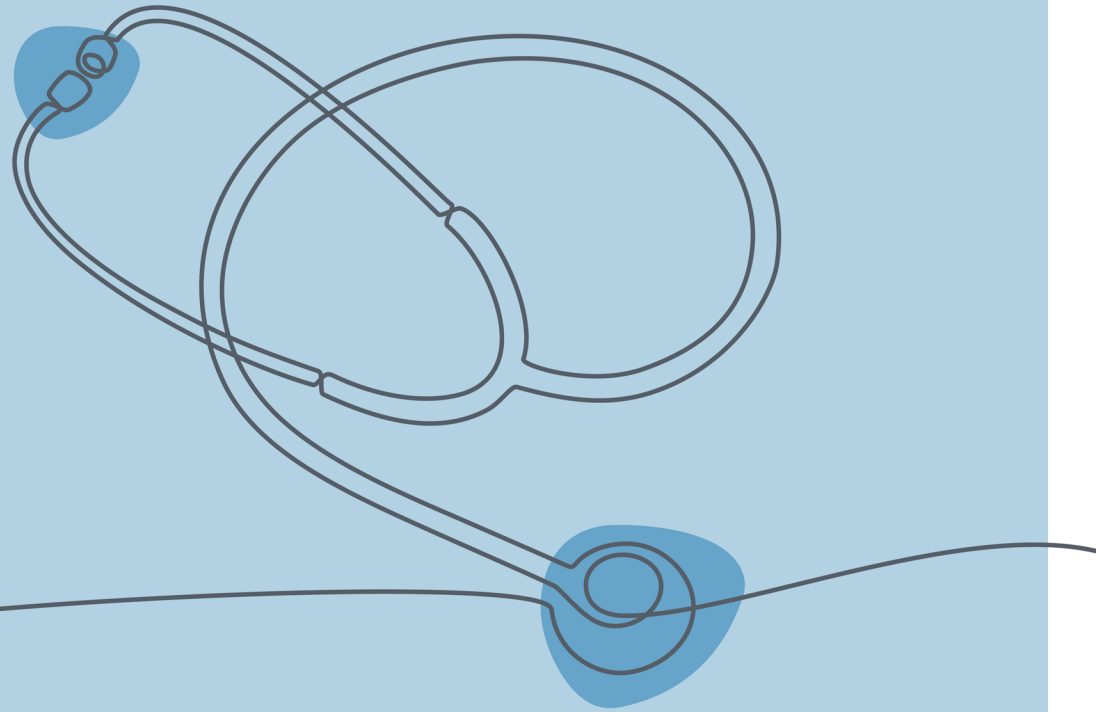


A collaborative, multi-disciplinary and multi-specialty learning opportunity for GPs covering conditions commonly managed in primary care

Syphilis

Dr Theo Van Lieshout | Sexual Health Physician, Metro North Sexual Health & HIV Service

phn BRISBANE NORTH
An Australian Government Initiative

Queensland Government
Metro North Health

Syphilis Knowledge Survey

Case study

Theo van Lieshout

MBBS, BA, DCH, Dip Med (Sexual Health) Dip GU Med (Lond.) FRACGP FAChSHM

Sexual Health Physician

Sexual Health& HIV Service Metro North – Roma Street Brisbane

Acknowledgement of First Nations People

I acknowledging the Turrbul and Jagera people, Traditional Custodians of the land on which we meet today and pay my respects to their Elders past and present. I extend that respect to Aboriginal and Torres Strait Islander peoples here today.

Disclosures

- Nil

Chief complaint

“I think I’m allergic to something “

History of presenting illness

- JS is a 27-year-old man who presents to your medical practice.
- He states he was in his usual health until about three days ago when he began developing a rash on his stomach that is now on his upper limbs. He feels well now.
- The rash is not painful or itchy.

Past History

- Past medical history: none
- Past surgical history: none
- Family history: Father has hypertension. Mother has type two diabetes.
- Cigarettes: nil Marijuana: occasional. Nil else illicit Alcohol: 5 U daily IVDU: nil
- Allergy: N/K
- Vaccination history: Vaccinated as child.

Social History

- Works in retail.
- Single and sexually active with regular female partner “in open relationship”. She is “about four months pregnant”.
- Unprotected oral and anal sex with regular and casual male partners.
- Two or three casual male partners in past month.
- He has never been vaccinated against HPV stating that it is a woman’s disease.
- Unsure if he’s ever received a Hepatitis A vaccine.

Physical examination

- Well-looking 27-year-old man in no distress. Temperature 36.9° C. Wt: 62 kg. Ht: 175 cm
- Skin: Diffuse mucocutaneous rash noted on the abdomen, back, upper extremities including the palms of the hands and the soles of the feet; macules are easy to blanch and not associated with any area of fluctuance. Mouth nad.

Physical examination (cont)

- CVS: PR 72/min. BP 130/80. Heart sounds normal, no murmurs. no swelling of ankles
- RS: Trachea midline. Chest clear. No crepitations or rhonchi.
- GIT: Soft. No organomegaly. No rebound or guarding. Skin rash noted.
- CNS: Cranial nerves N. Motor N. Reflexes R=L=N. No neck stiffness.
- Genital Examination: Penis N. Testes x 2 no masses. Lymph nodes palpable ? slightly enlarged bilaterally. Nontender.
- (After the genital examination, the patient says that he “had this strange ulcer like thing on his penis a few of weeks ago. It didn’t hurt and went away”.)

Diagnosis

- Provisional diagnosis: Secondary syphilis
- Differential diagnosis: Pityriasis rosea. Drug eruption. Viral exanthum – including Primary HIV infection. Rarer: Psoriasis. Sarcoidosis…others
- You order investigations and ask patient to return in 2-3 days. You encourage him not to have sex until a diagnosis is established.

Investigations

- Bisexual male (Man who has sex with Men)
  - First pass urine PCR Chlamydia and Gonorrhoea, Throat PCR Chlamydia and Gonorrhoea, Rectal PCR Chlamydia and Gonorrhoea
  - Serology – HIV 1 and 11 Ag/Ab, HBsAg, sAb, cAb, HAV Ab, Syphilis serology. HCV Ab if IVDU

Results

- Chlamydia and gonorrhoea PCR in throat, anus and urine: negative
- HIV Ag/Ab: negative
- HBsAg neg. HBsAb pos. HBcAb neg.
- HAV Ab neg.
- Treponemal Ab positive. RPR: 1:64. TPPA positive

Serologic tests for Syphilis

- If a treponemal antibody test is positive, most labs perform two further tests
  - A quantitative test
    - Rapid Plasma Reagin - RPR (or a VDRL test)
      - Confirms active syphilis eg 1:16, 1:32, 1:64
      - Assesses therapeutic response – serial titres
  - A qualitative test
    - Treponema Pallidum Particle Agglutination (TPPA)
      - Indicates the presence of treponemal exposure (venereal syphilis, yaws, pinta and non-venereal syphilis)
      - Positive in early, late and treated syphilis

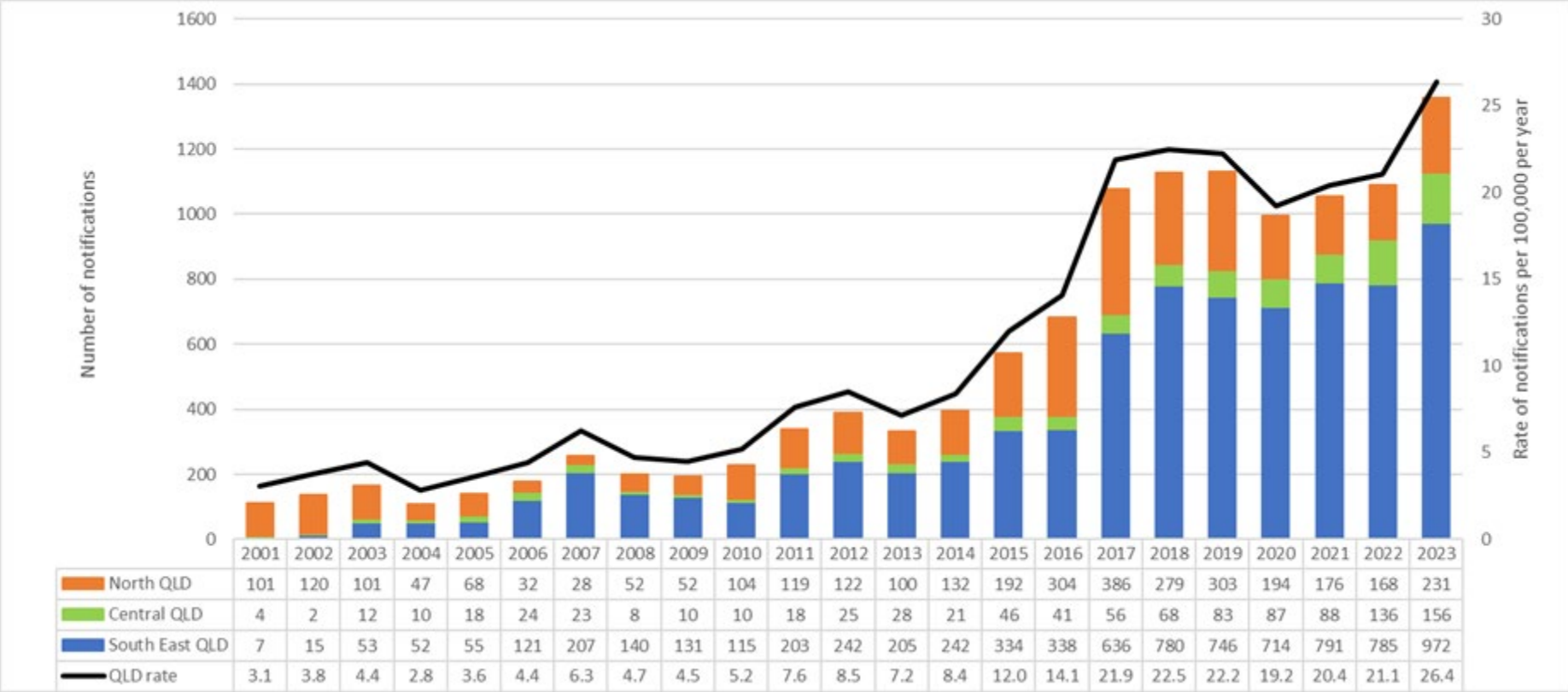
Treponema pallidum - syphilis

- Investigations:
  - PCR test of genital ulcer detects DNA and can be positive before serology is positive
  - Serology most common source of cases
    - Treponemal Antibody (Ab)
    - Rapid Plasma Reagin (RPR)
      - Quantitative ie titres eg 1:64. A 4 fold drop in titre indicates successful treatment
    - Treponema Pallidum particle Agglutination (TPPA)
      - Qualitative ie indicates current or past disease
  - Early (1°, 2°) = infectious vs Late (3°) is not

Treponema pallidum - syphilis

- A spirochete
- Long historical record since mid 15th C
- Primary – chancre
- Secondary – rash, alopecia, mucous membrane patches
- Tertiary – bone, brain and cardiovascular
- Vertical transmission – congenital syphilis
- Epidemic in Queensland at present.

Syphilis rates in Queensland



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
North QLD	101	120	101	47	68	32	28	52	52	104	119	122	100	132	192	304	386	279	303	194	176	168	231
Central QLD	4	2	12	10	18	24	23	8	10	10	18	25	28	21	46	41	56	68	83	87	88	136	156
South East QLD	7	15	53	52	55	121	207	140	131	115	203	242	205	242	334	338	636	780	746	714	791	785	972
QLD rate	3.1	3.8	4.4	2.8	3.6	4.4	6.3	4.7	4.5	5.2	7.6	8.5	7.2	8.4	12.0	14.1	21.9	22.5	22.2	19.2	20.4	21.1	26.4

Treatment

- Benzathine penicillin 1.8 G IMI stat – NOT BENZYL PENICILLIN – is treatment of choice
- On PBS list in pre-filled syringes: 900 mg IMI x 2 injections; one in each buttock/ventrolateral aspect thigh
- Available free in PBS Doctor's Bag
- Female partner needs urgent review and treatment
- Recent shortage – pharmacies have equivalent other brands. If unable to access, call RBWH pharmacy.
- Repeat syphilis serology at 3, 6 and 12 months to assess cure

Contact tracing

- All sexual contacts for the previous six months should be found, investigated and treated if positive.
- Anonymous notification online: Drama Down Under. Let Them Know.
- Resources: The Queensland Syphilis Surveillance Service (QSSS) is a secure, confidential, single state-wide database established to improve the accuracy of syphilis reporting, monitor trends in syphilis notifications and improve the management of individuals affected by syphilis. All laboratory-based positive syphilis test results for Queensland residents are reported to the QSSS. Email them QLD-Syphilis-Surveillance-Service@health.qld.gov.au
- Any questions about patient, call the Sexual Health & HIV Service. Tel: 38375611

Syphilis Knowledge Survey

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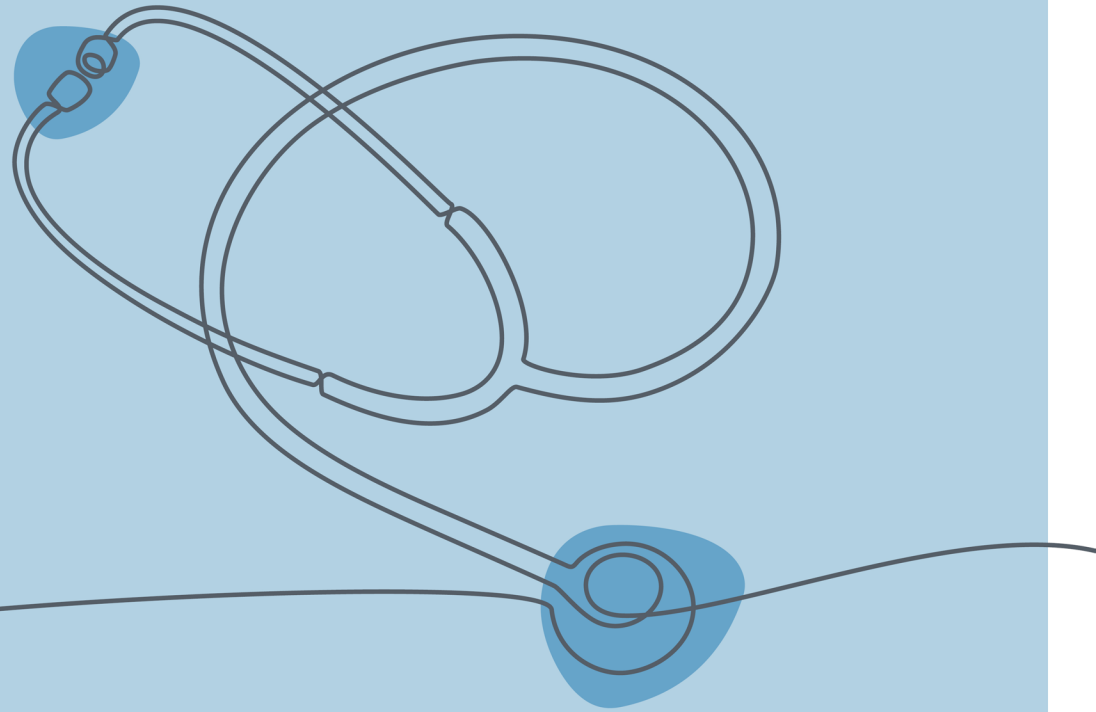

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ECG

Dr Mohsen Habibian | Cardiologist, TPCH

phn BRISBANE NORTH
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Queensland Government
Metro North Health

Championing Generalism Workshop

RACGP

CASE STUDY SESSION

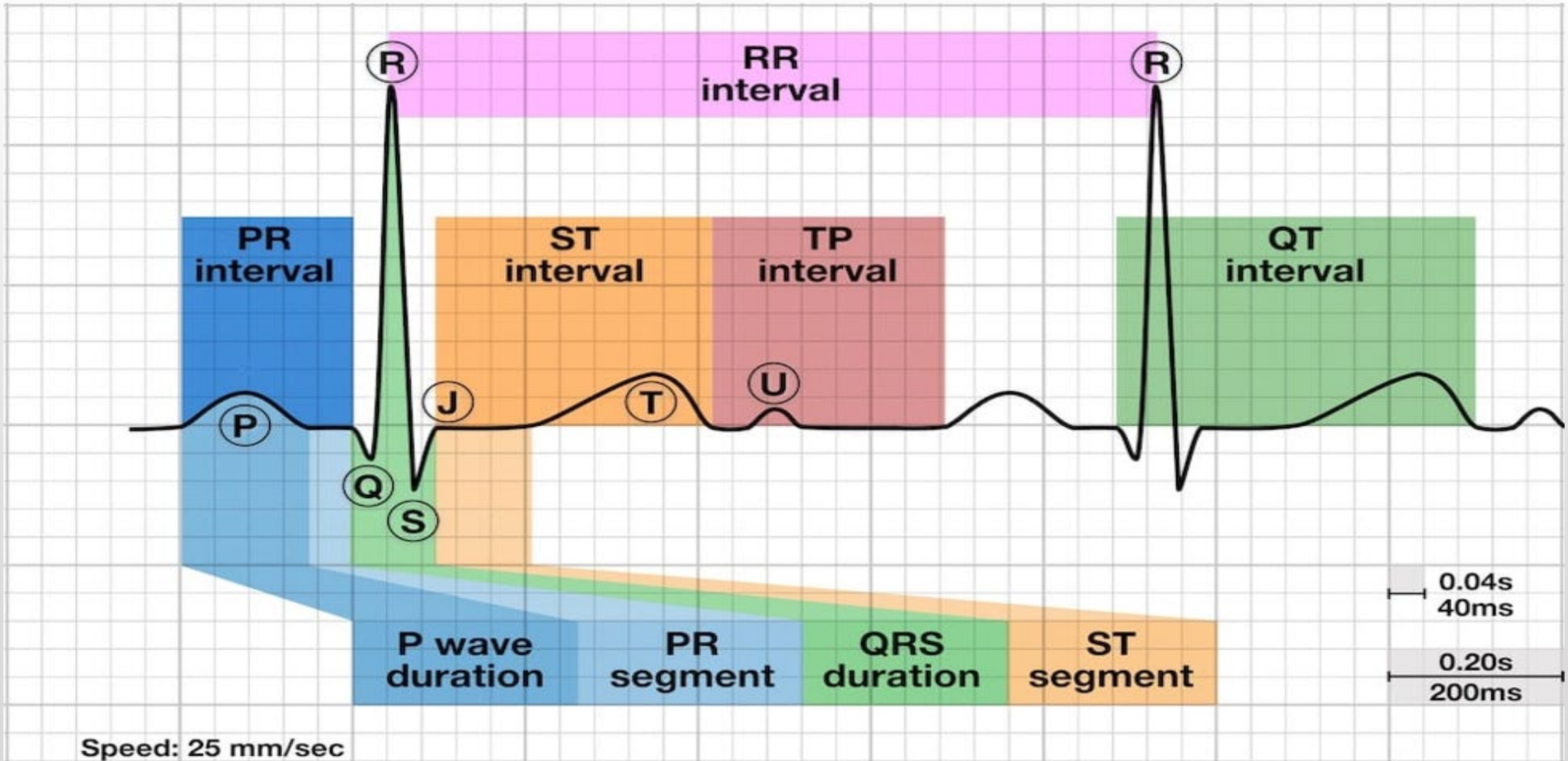
ECG

Dr Mohsen Habibian

MD, FRACP, FCSANZ

ST VINCENT'S PRIVATE HOSPITAL NORTHSIDE

ECG – BASIC PRINCIPLES



Case Study 1 – Mrs. Jones

Presentation June 2023

- 41-year-old female.
- 4-5 days of intermittent sharp central chest pain - Increase frequency and duration
- Pain improves when sitting up/leaning forward. Worse when flat.
- Mild dyspnoae
- Associated pre-syncope
- Business owner. Lives with husband and two children.

History

- Viral URTI - 1/52 ago
- COVID19 - 7/52 ago (May 2023)
- mRNA vaccination August 2022 followed by a 2/52 presentation of Chest pain
- COVID19 – February 2022
- Paroxysmal AF 2022 in the context of viral illnesses.
- Anxiety

Medications:

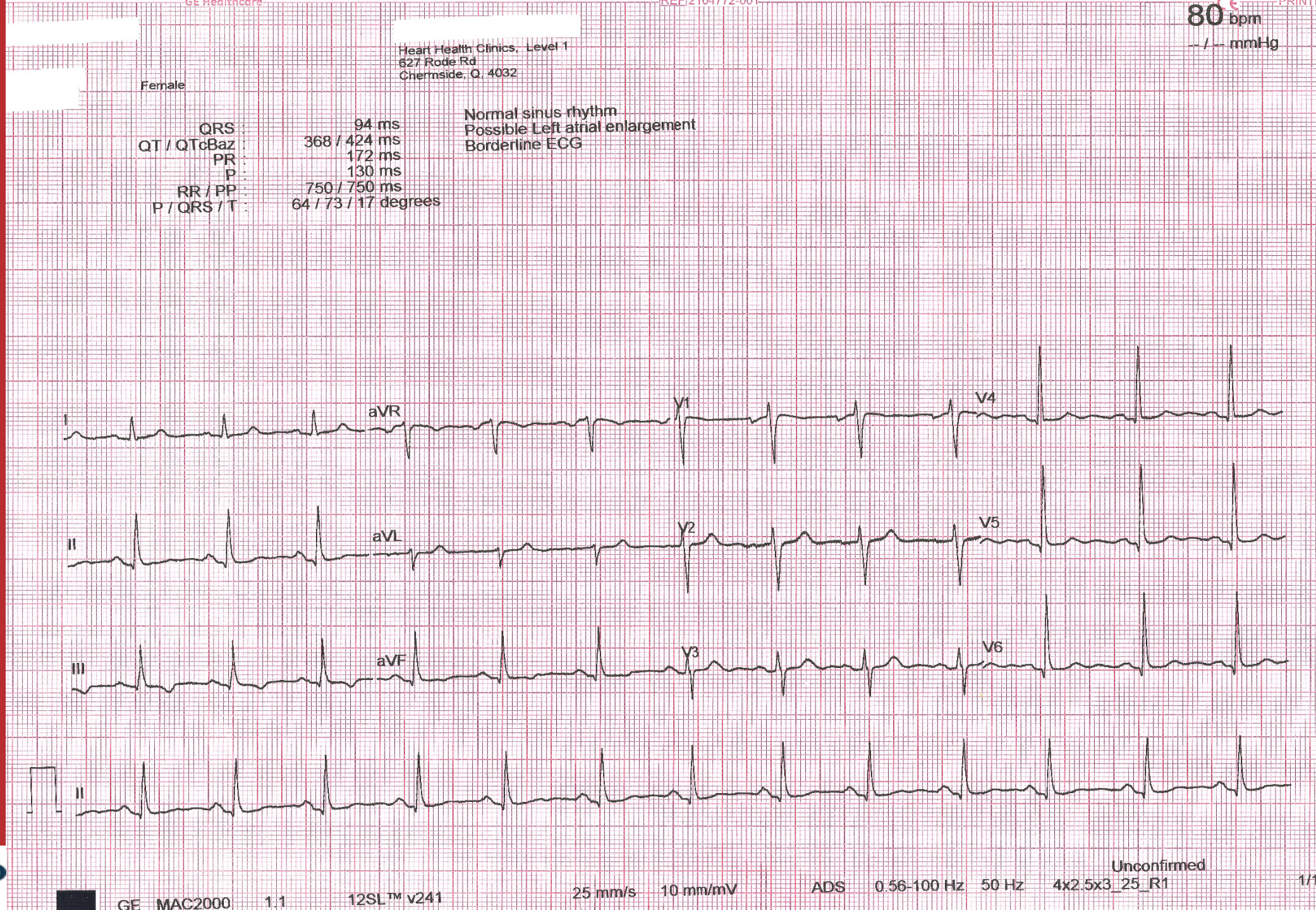
- Nil Regular

Allergies:

- NKDA

Case Study 1

12 Lead ECG



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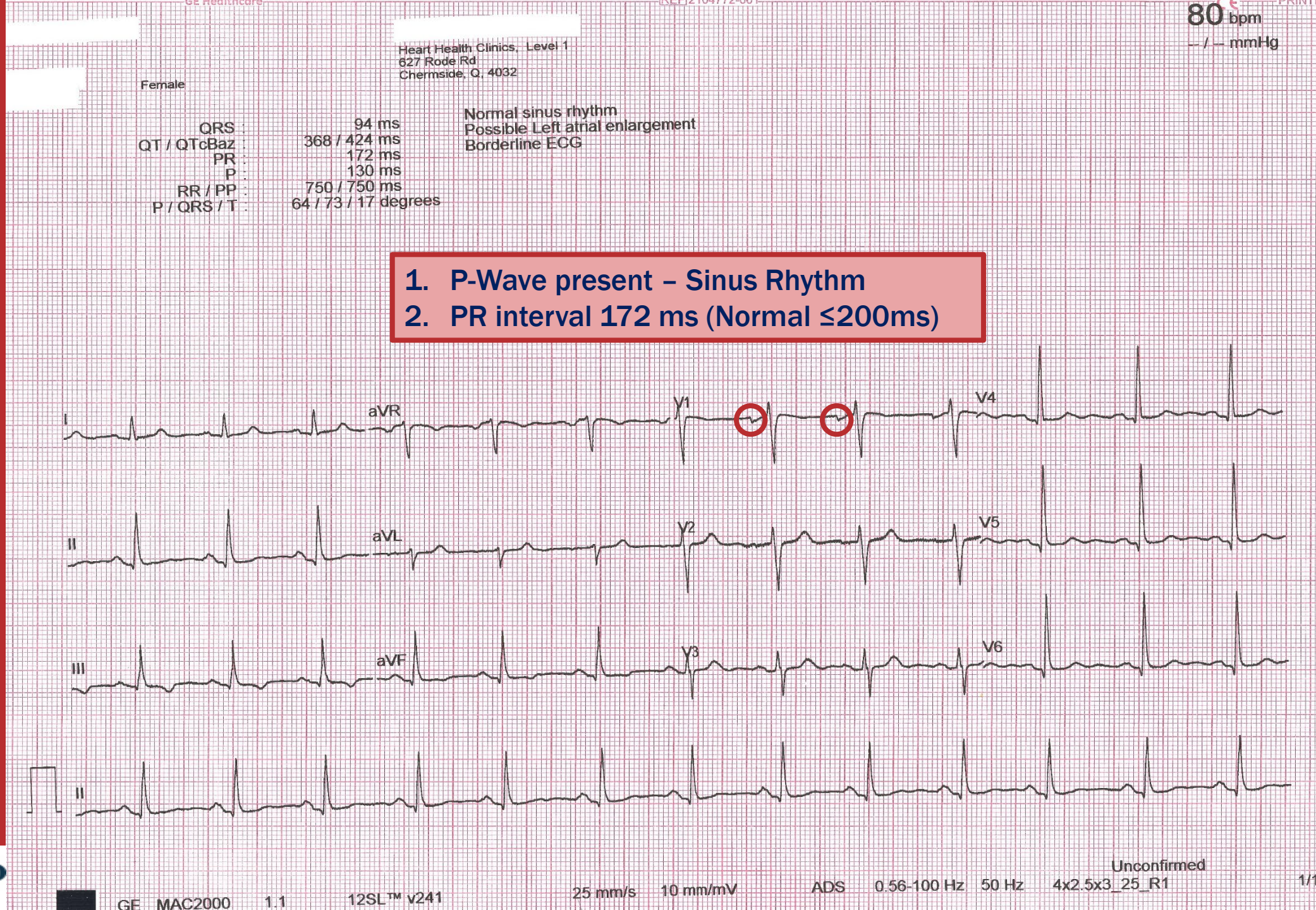
Case Study 1

12 Lead ECG



1. P-Wave present – Sinus Rhythm
2. PR interval 172 ms (Normal ≤200ms)

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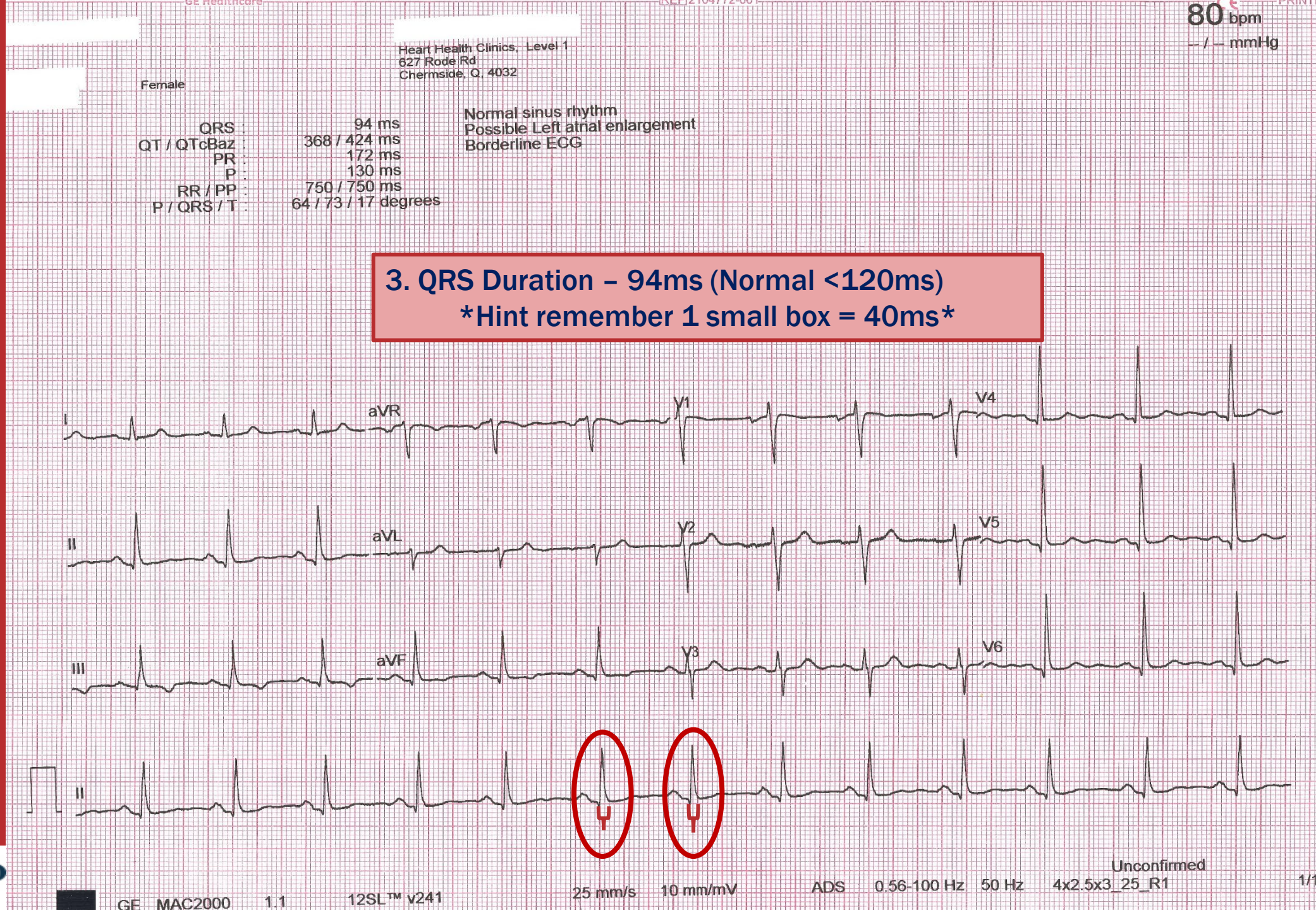
Case Study 1

12 Lead ECG



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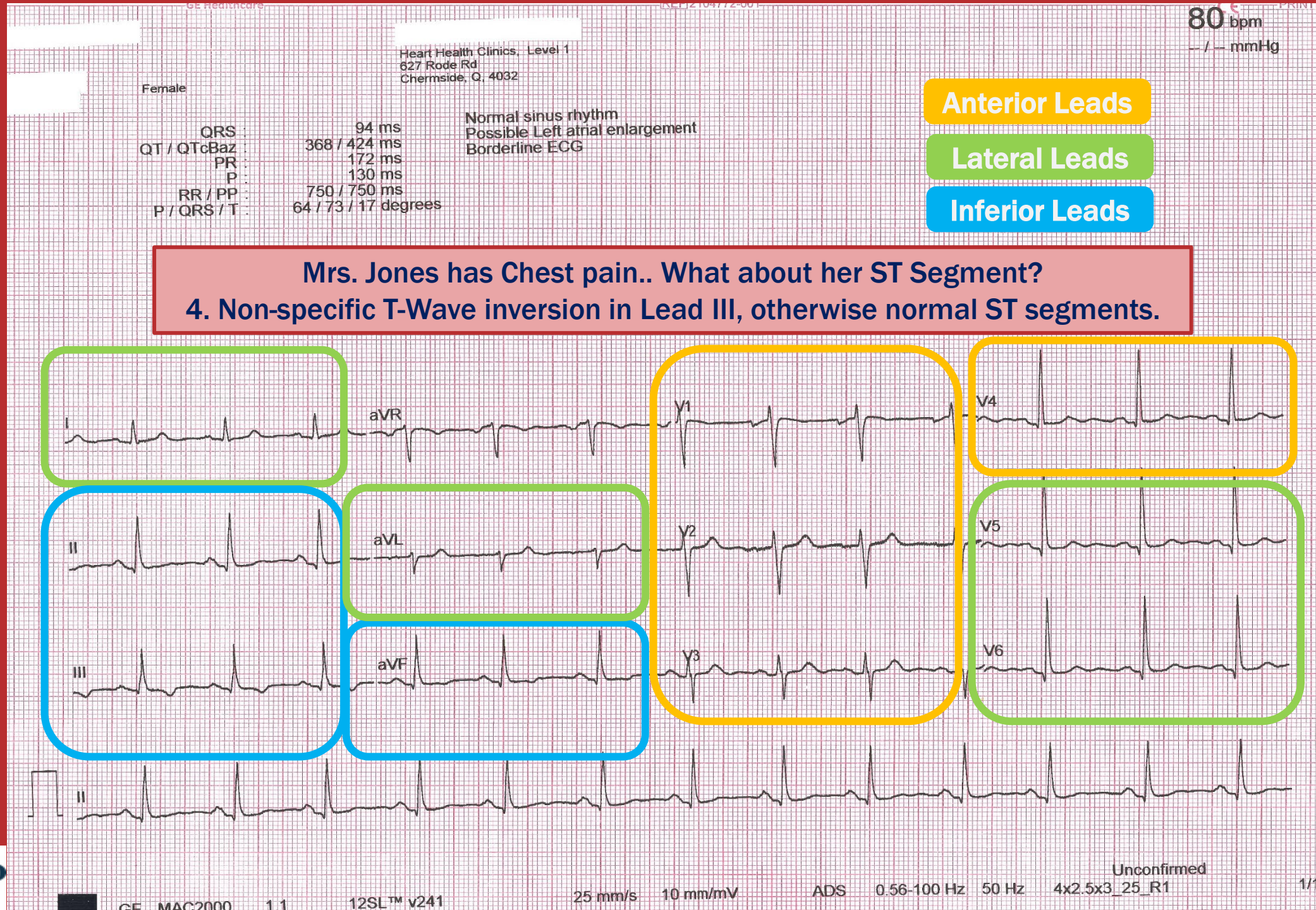
12 Lead ECG



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Case Study 1

12 Lead ECG

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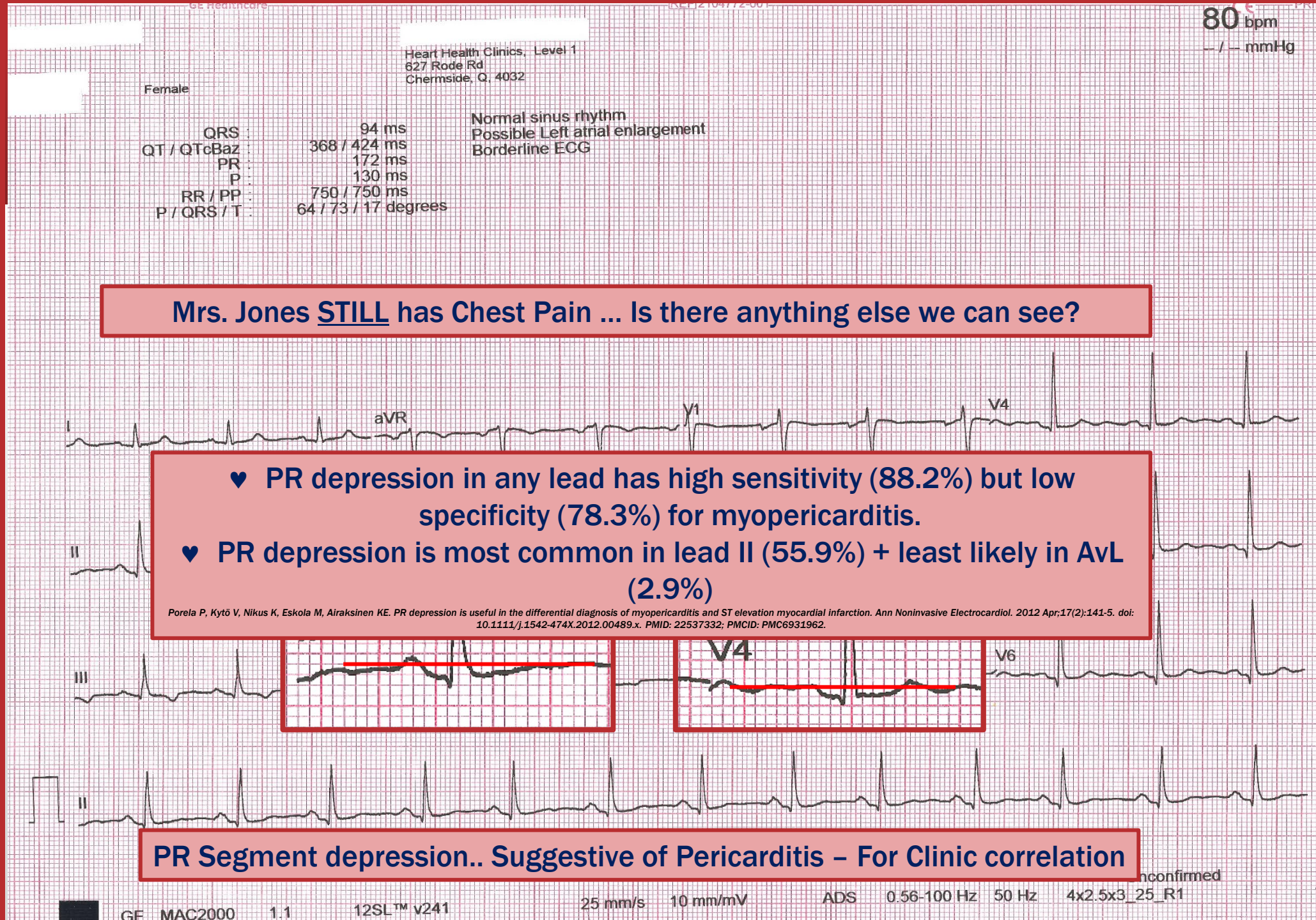
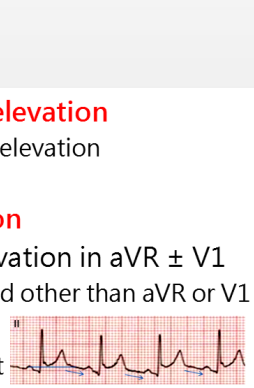
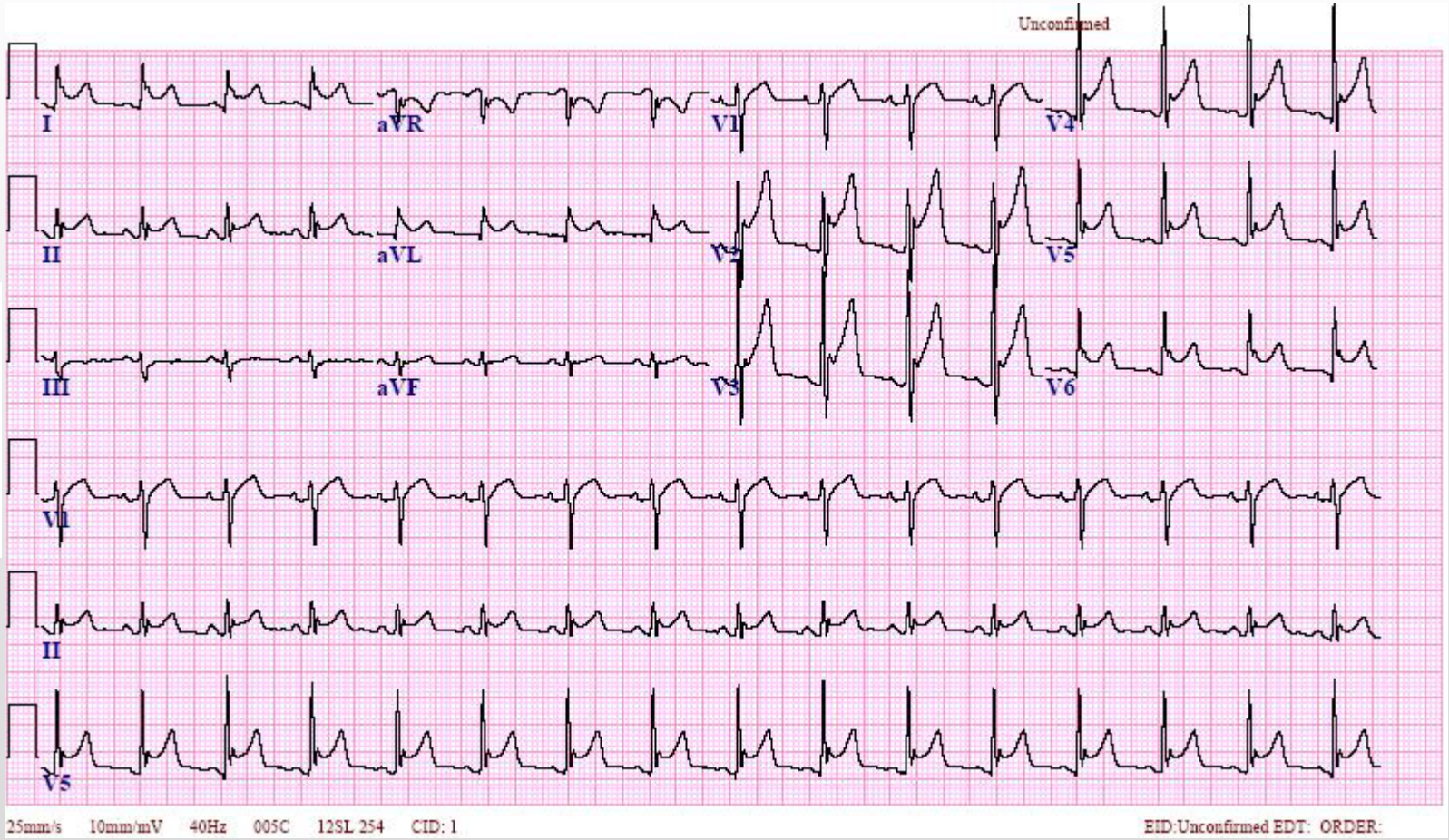


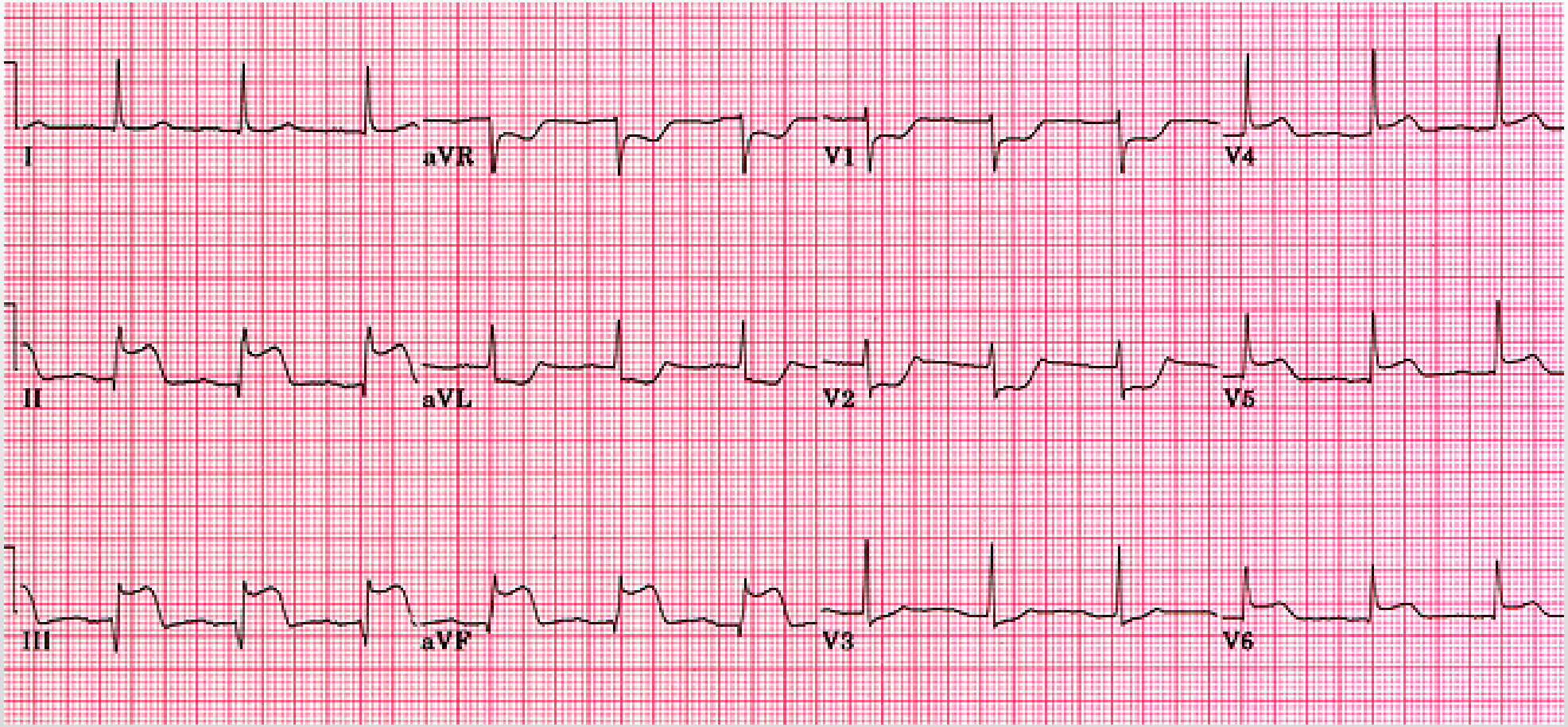
Typical Pericarditis ECG

1. Widespread concave ST elevation
   - No convex or horizontal ST elevation
   - ST elevation in II > III
2. Widespread PR depression
3. ST depression and PR elevation in aVR ± V1
   - No ST depression in any lead other than aVR or V1
4. Spodick's sign positive
   - downsloping of TP segment

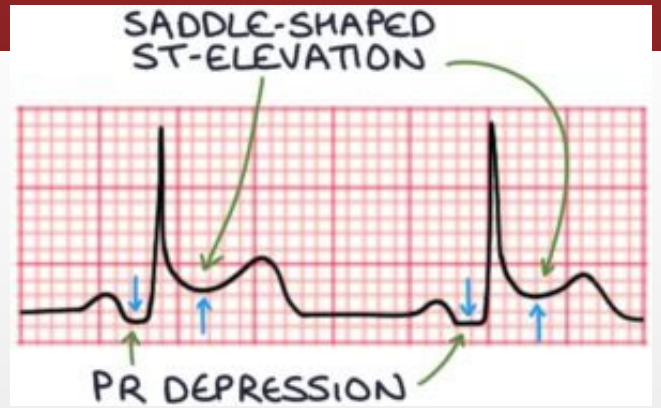


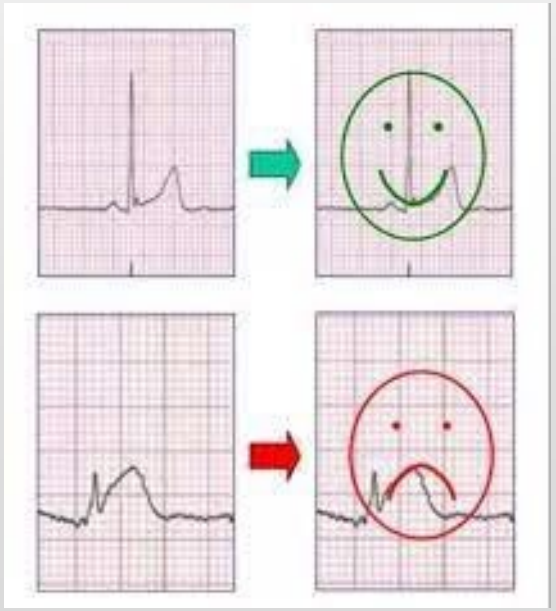


Typical STEMI ECG



Important concept in ECG: MI versus Pericarditis





Acute Pericarditis

✓ EKG changes over weeks: ST elevation and PR depression → return to baseline → diffuse T wave inversions
  ✓ May be mistaken for early repolarization

Diffuse ST elevations

PR depressions

I aVR V1 V4
II aVL V2 V5
III aVF V3 V6
V1
II
V5

✓ Chest pain is classically **pleuritic** and **improved by leaning forward**
✓ **Friction rub** is subtle finding on L lower sternal border
✓ Elevation of troponin indicates **myocarditis** or **myopericarditis**

Case 1 (Pericarditis) V's Case 4 (STEMI)

PR Depression Is Useful in the Differential Diagnosis of Myopericarditis and ST Elevation Myocardial Infarction

Pekka Porela, Ph.D., [1] Ville Kytö, Ph.D., [1] Kjell Nikus, M.D., [2] Markku Eskola, Ph.D., [2] and K.E.J. Airaksinen, Ph.D. [1]

Table 1

Sensitivity, Specificity, and Predictive Values of Location of PR-Segment Depressions (≥0.05 mV) in Standard 12 ECG Leads to Differentiate Myopericarditis from STEMI

	Myopericarditis (n = 34)	STEMI (n = 46)	Sensitivity	Specificity	PPV	NPV
Any lead	88.2%	21.7%	88.2	78.3	75	90
Any anterior lead	73.5%	6.5%	73.5	93.4	89.3	82.7
Any lateral lead	52.9%	13.0%	53.9	86.0	75	71.4
Any inferior lead	79.4%	10.9%	79.4	89.1	84.4	85.4
Anterior+lateral leads	38.2%	2.2%	38.2	97.8	92.9	68.2
Anterior+inferior leads	67.6%	2.2%	67.6	97.8	95.8	80.4
Lateral+inferior leads	44.1%	6.5%	44.1	93.5	83.3	69.4
Anterior+lateral+inferior leads	32.3%	2.2%	32.4	97.8	91.7	66.2
Any precordial lead	88.2%	8.7%	88.2	91.3	88.2	91.3
Any limb lead	85.3%	15.2%	85.3	84.8	80.6	88.6
Precordial+limb leads	85.3%	2.2%	85.3	97.8	96.7	90

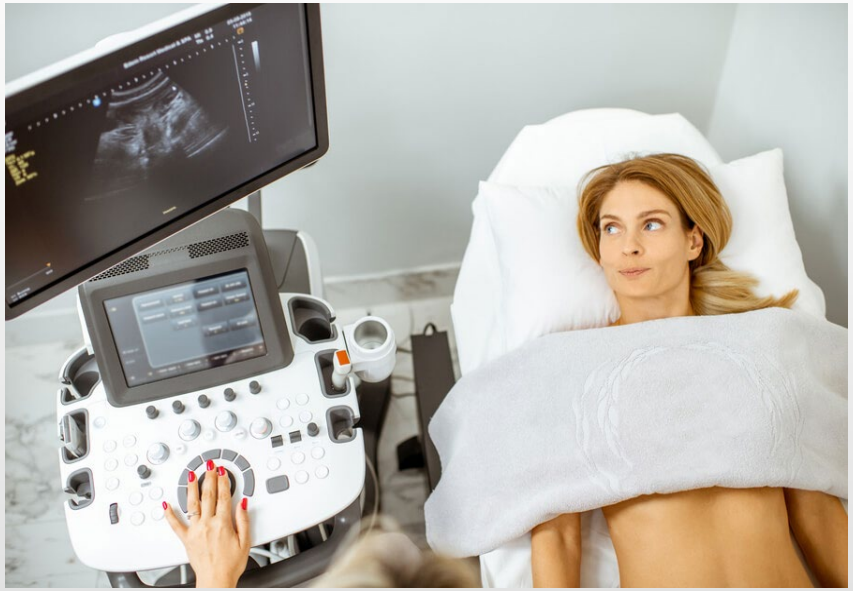
Open in a separate window

$P < 0.01$ in all group comparisons. Anterior leads = V_1–V_4; lateral leads = I, aVL, V_5–V_6; inferior leads = II, III, aVF; precordial leads = V_1–V_6; limb leads = I, II, III, aVL, aVF; PPV = positive predictive value; NPV = negative predictive value.

Case Study 1 – Mrs Jones

Supplementary investigations performed

- **Echocardiogram:** *Increased Echogenicity and pericardial thickening – For clinical correlation*
- **Pathology:** *FBC, E/LFT, CRP, Vitamin D, B12/Folate, ESR, TFT, Hs Troponin – Normal*
- **CTPA:** *No PE. Trace right basal Pleural effusion.*



CONCLUSIONS:
1. Upper normal left ventricular cavity size (end diastolic volume 95 mL per square) with normal systolic function. No regional wall motion abnormalities.
2.Right ventricular size and systolic function appear normal.
3.Normal native myocardial T1 and T2 values.
4.No myocardial oedema demonstrated on T2 sequences.
5.Tiny bilateral pleural effusions, and tiny pericardial effusion.
6.Minor sub epicardial delayed gadolinium enhancement the basal inferior septal region. Taken in combination with the pleural and pericardial fluid, this would be in keeping with mild myocarditis/pleuro-pericarditis.

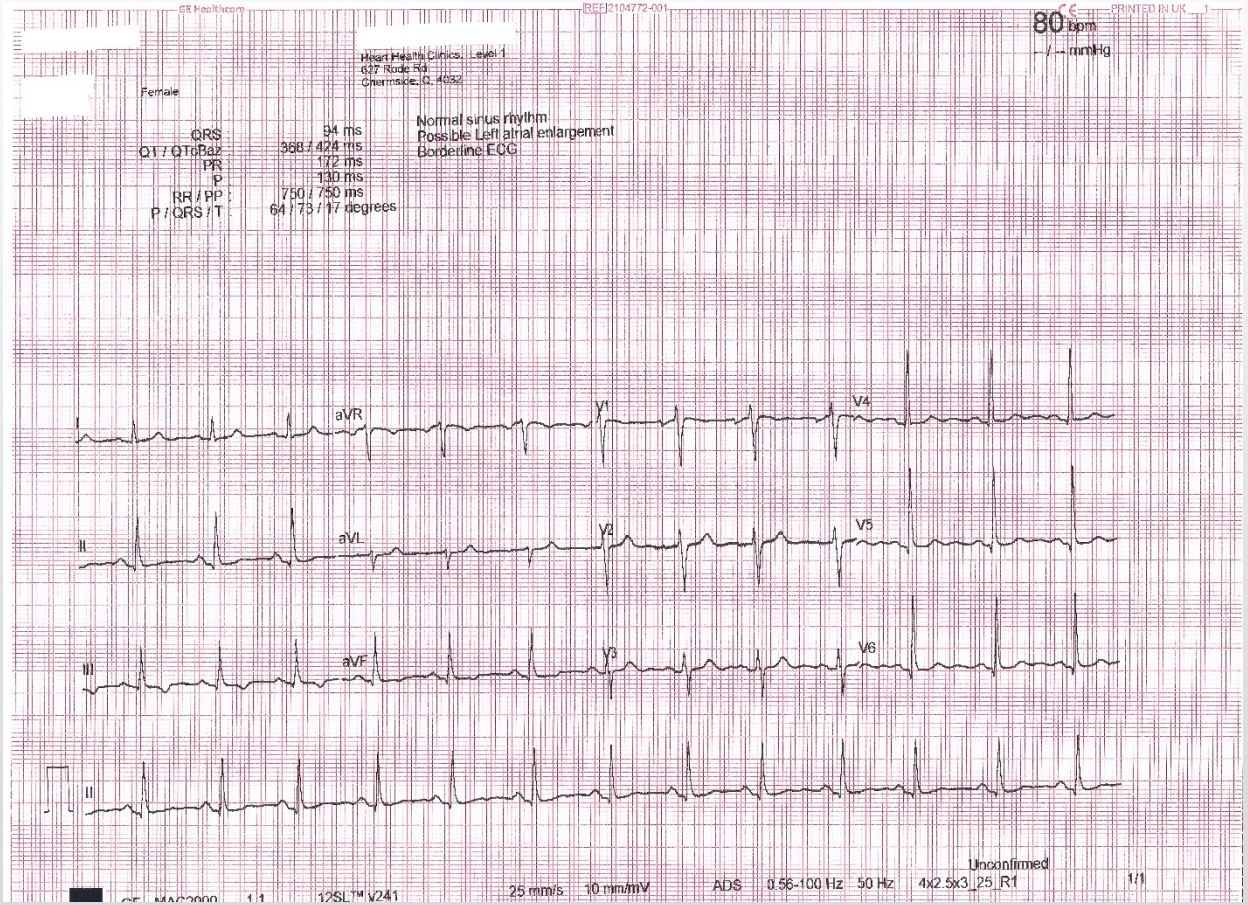
TRANSTHORACIC ECHOCARDIOGRAM REPORT

Conclusions

1a. Upper limits of normal LV cavity size with normal ejection fraction, EF 69 %.
1b. Normal peak average LV GLS at [23 %].
1c. Normal diastolic function - Normal LV filling pressures.
2. RV cavity size is at the upper limits of normal size with normal systolic function.
3. MV: Grade 0-1/4 Mitral regurgitation.
4. TV: Grade 0-1/4 Tricuspid regurgitation, estimated RVSP 20 mmHg.
5. Increased echogenicity and pericardial thickening, consider with the clinical context, these features may represent findings consistent with pericarditis.

Electronically signed by Dr Mohsen Habibian

Diagnosis & outcome Case Study 1 – Mrs. Jones



Diagnosis:

- Recurrent Pericarditis. Exacerbated by mRNA vaccination in 2022 + viral illness exposure/COVID19 infections.
- Dx initially suspected due to clinical presentation + ECG. Confirmed with Echocardiography and CMRI + exclusion of differential Dx.

Treatment:

- Symptom resolution with a trial Colchicine + Ibuprofen

NOTE: Precautions for agranulocytosis

CASE STUDY 2 – Mrs. Hill

Presentation January 2023

- 75-year-old female.
- Left knee osteoarthritis otherwise asymptomatic.
- Presenting for orthopedic surgical work up.
- HTN, T2DM, Dyslipidemia, increased BMI

History

- HTN, T2DM, Dyslipidemia, increased BMI.

Medications:

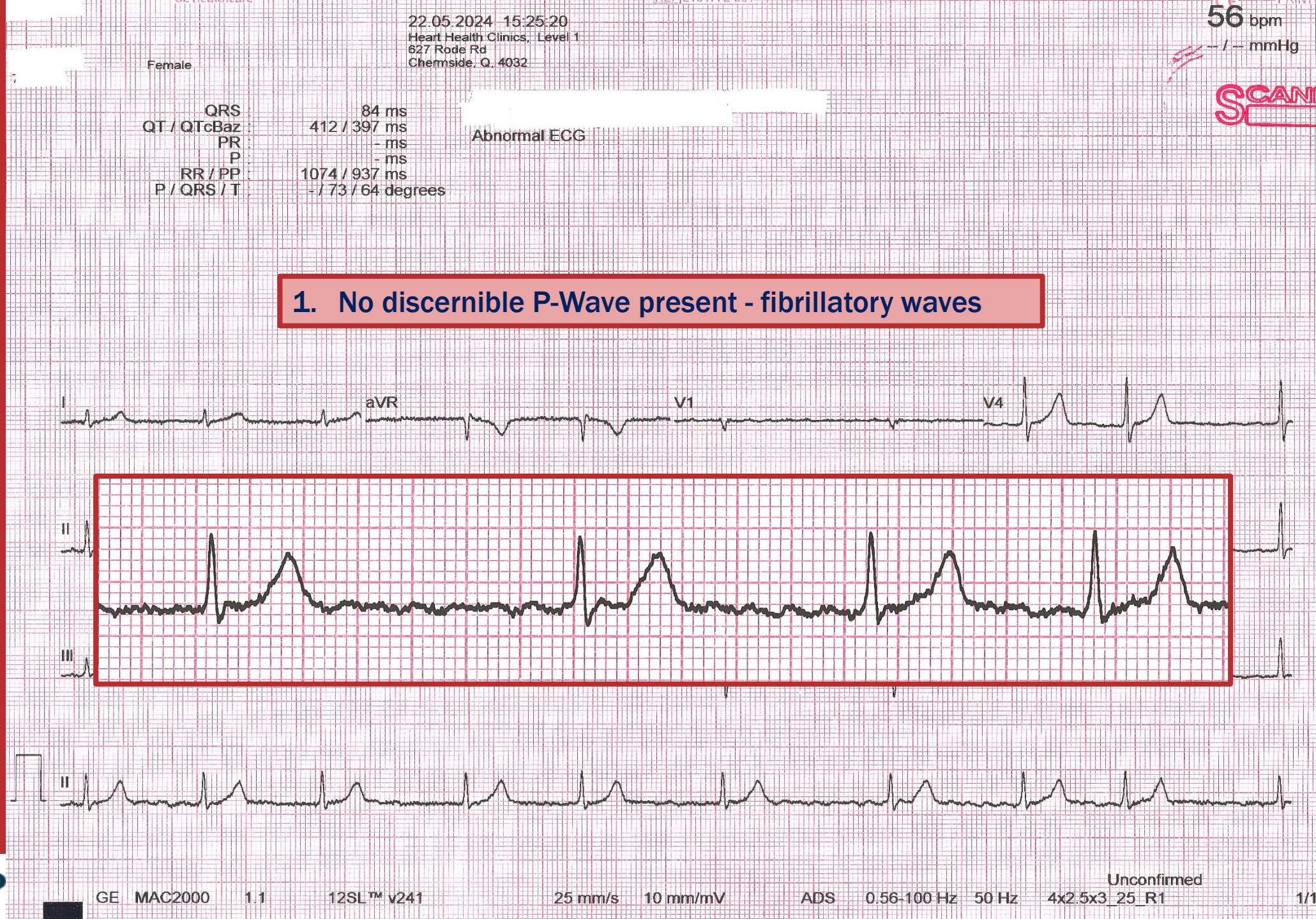
- Ramipril, Candesartan, Metformin, Aspirin, Pantoprazole

Allergies:

- Competitors at bingo.

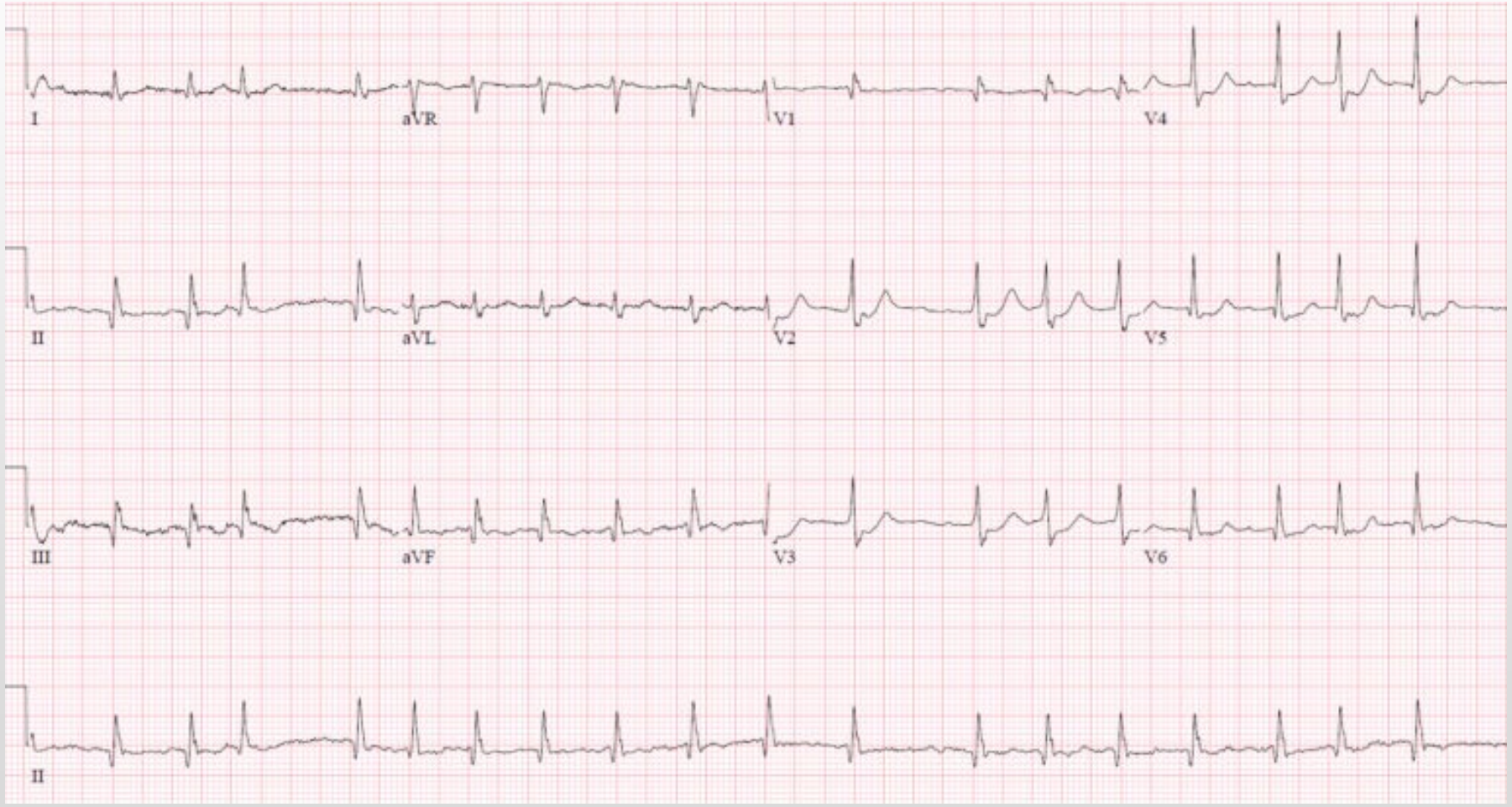
Case Study 2

12 Lead ECG



RACGP

Typical Atrial Fibrillation ECG



CASE STUDY 3 – Miss Brodie

Presentation February 2024

- 23-year-old female.
- Elite Athlete, soccer player
- 7 years of palpitations
- Palpitations come on like “switching on the light”
- 2 coffees per day
- 2-3 glasses of G&T on weekends with friends

History

- Reactive airways when viral respiratory illness

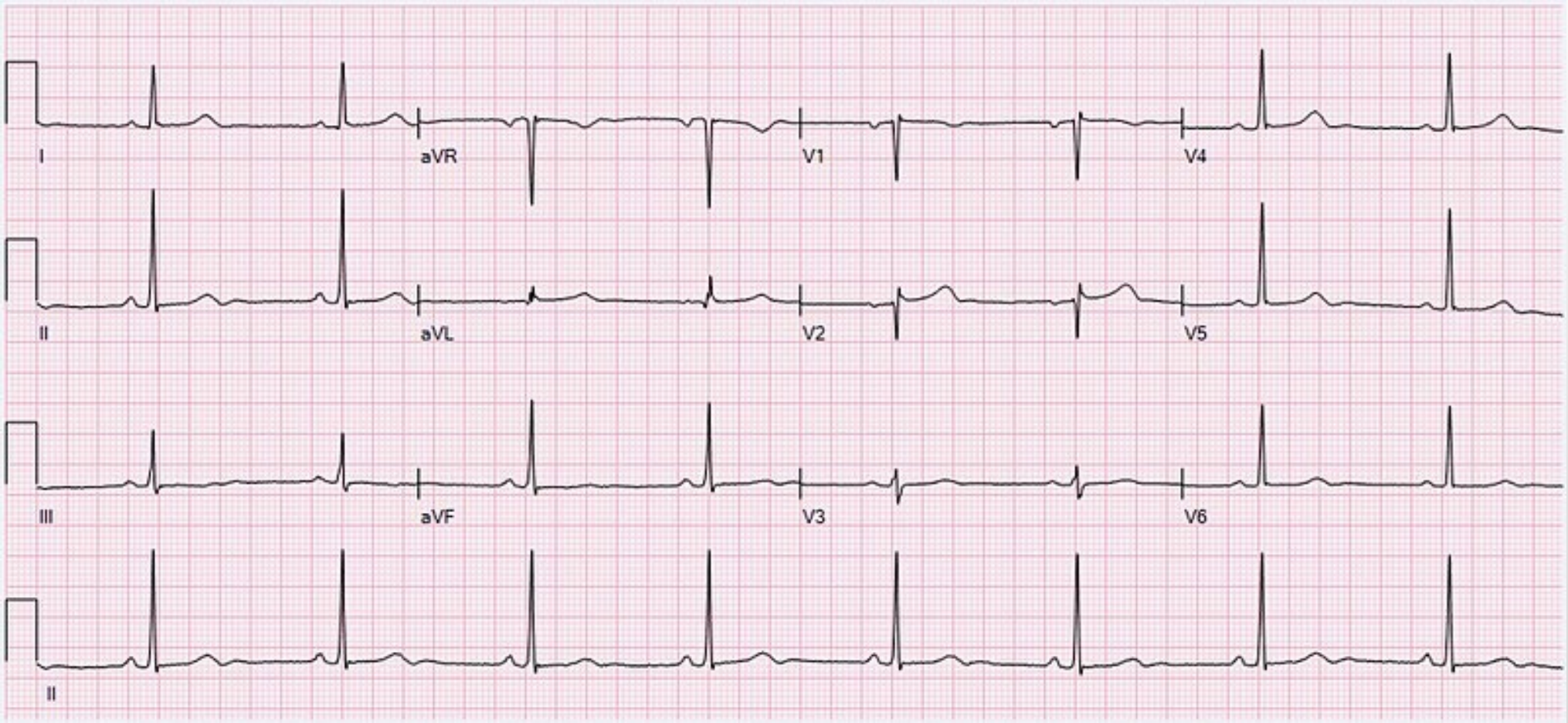
Medications:

- OCP

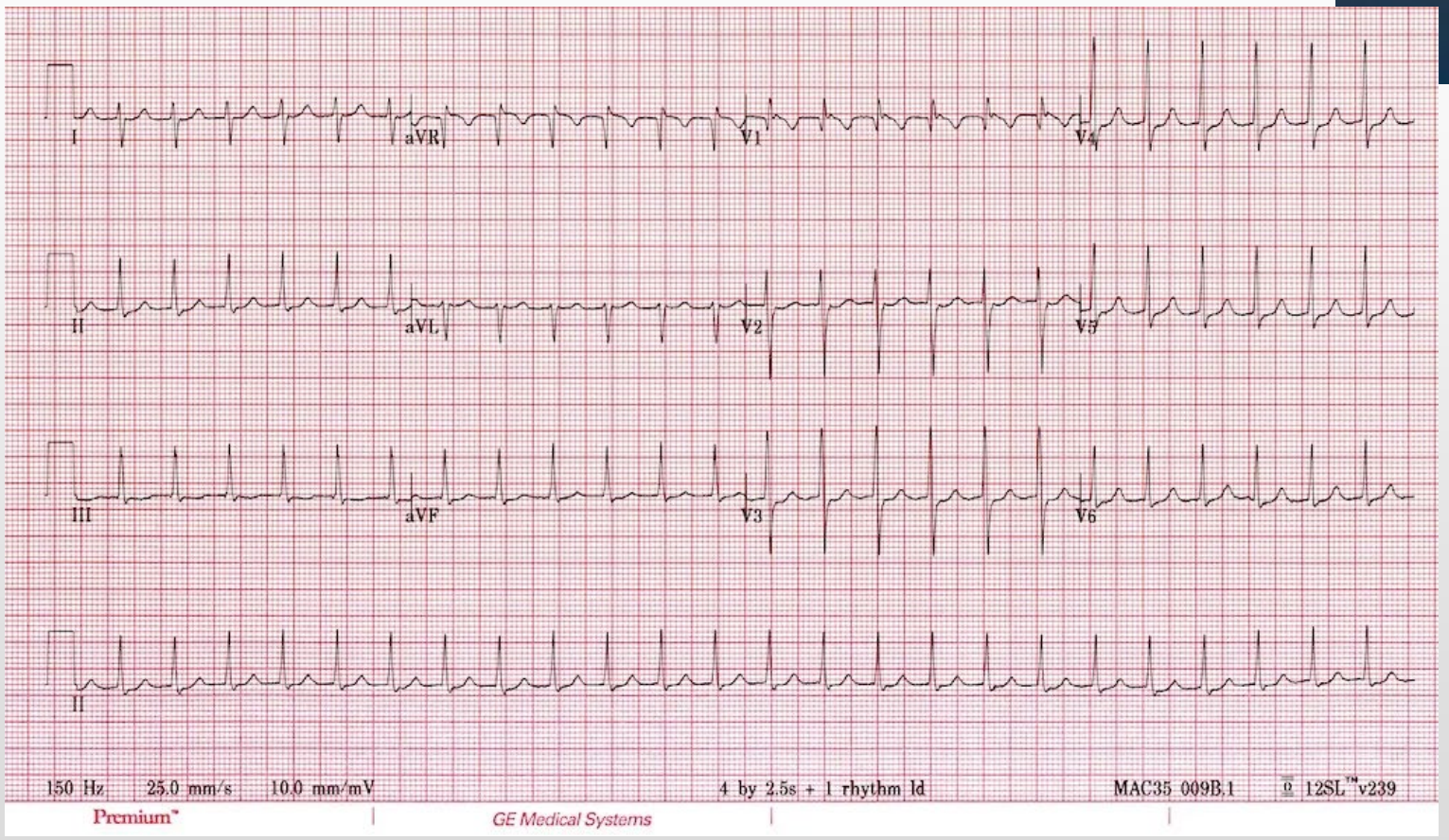
Allergies:

- Latex

Frequent ECG's and Holter

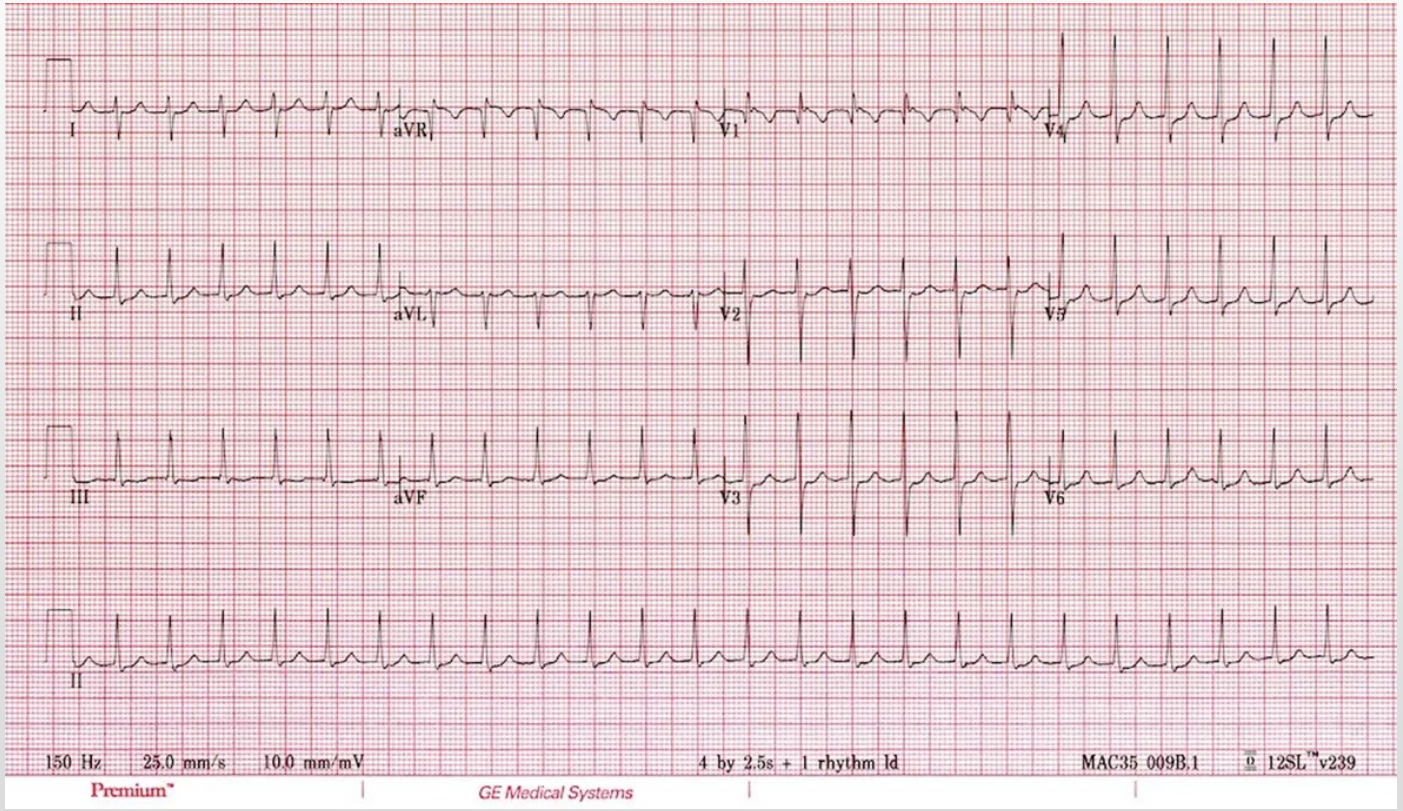


Exercise Stress Test (ECG)

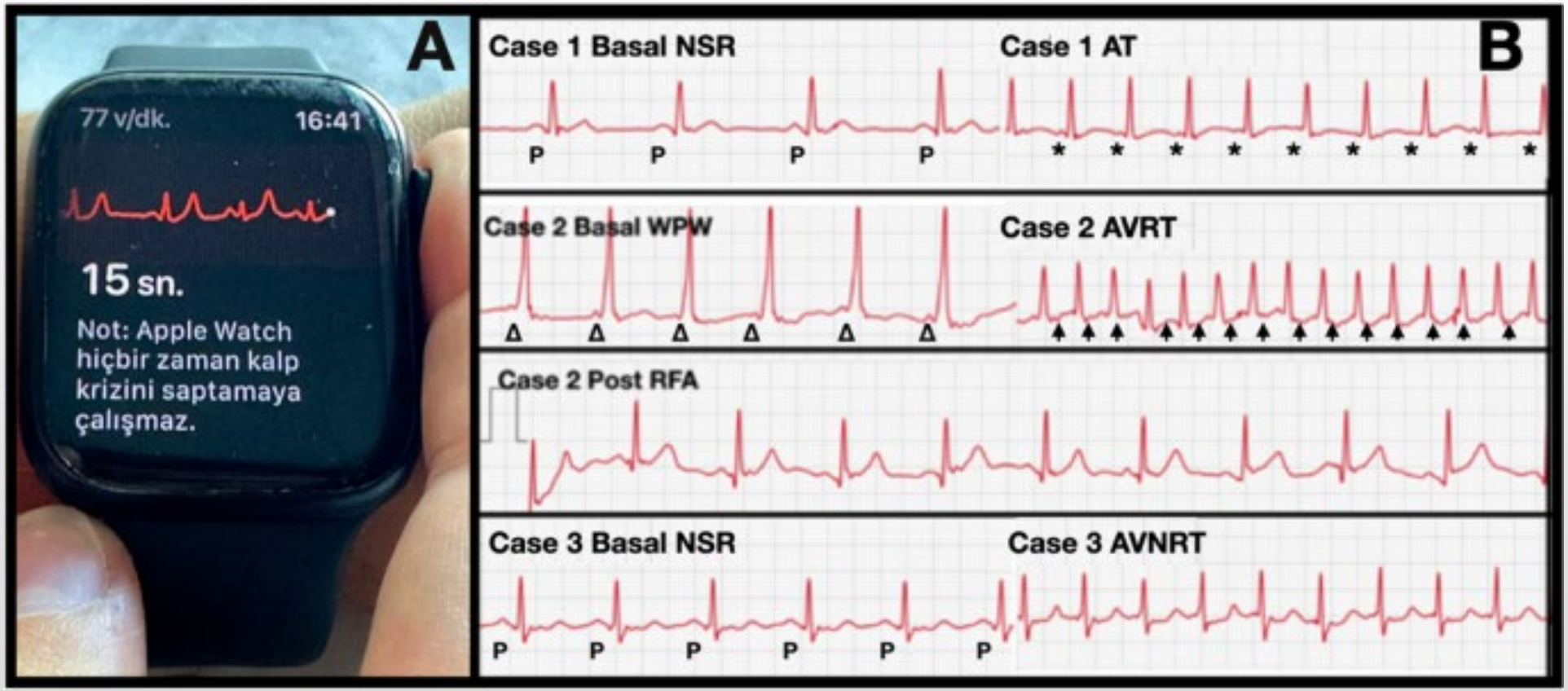


SVT ECG

- Regular tachycardia ~140-280 bpm
- Narrow QRS complexes (< 120ms) unless there is co-existing bundle branch block, accessory pathway, or rate-related aberrant conduction
- P waves if visible exhibit retrograde conduction with P-wave inversion in leads II, III, aVF. They may be buried within, visible after, or very rarely visible before the QRS complex



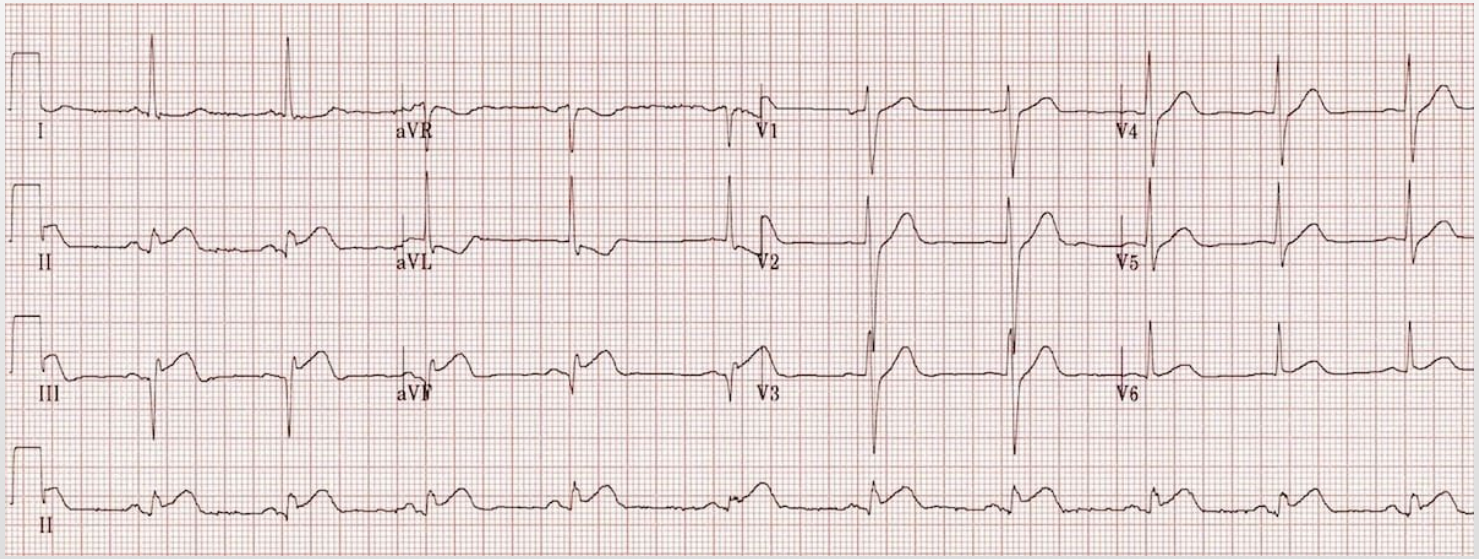
The role of “smart devices” in assessment of palpitations, when the patient is keen



Questions

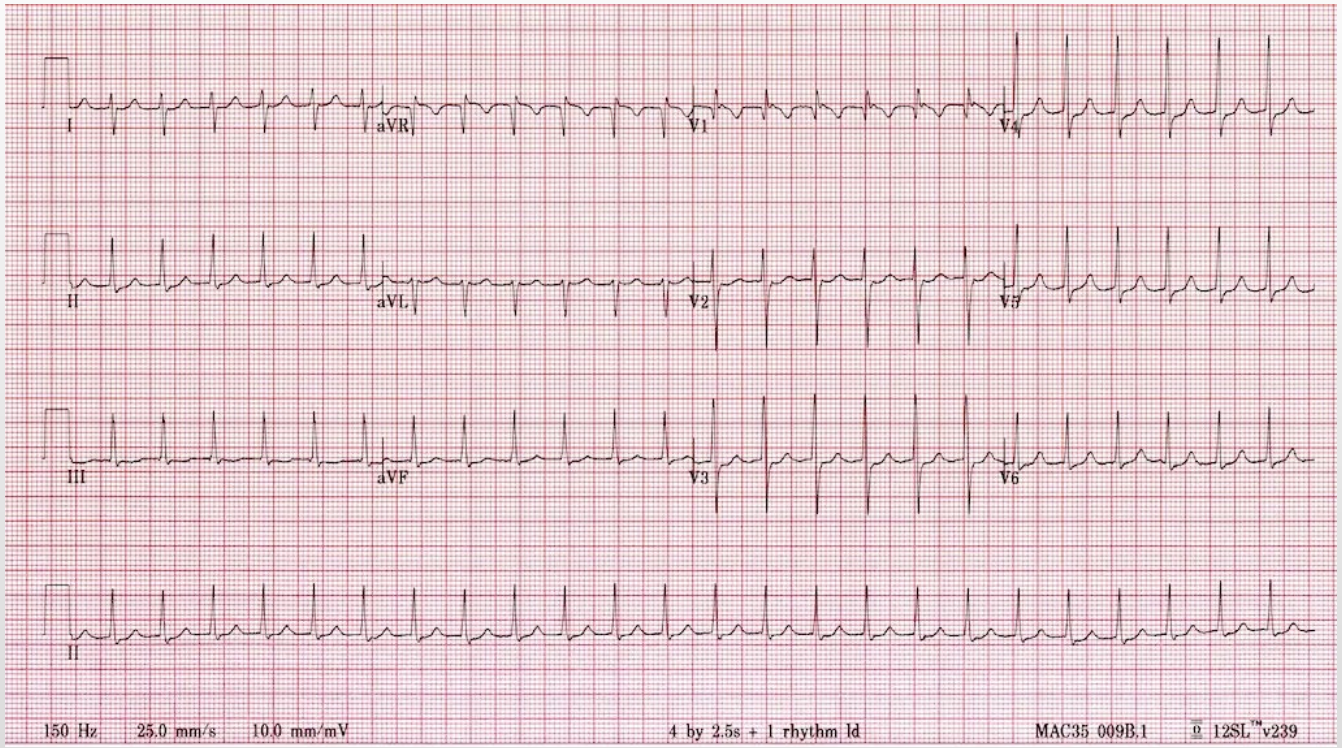
Q1: 64-year old male, 40PYH of smoking, hypertension, dyslipidaemia

- 1. Pericarditis
- 2. Myopericarditis
- 3. Inferior STEMI
- 4. Aortic dissection



Q2: 23-year-old female, intermittent palpitations, resolved by strong cough

- 1. Sinus tachycardia
- 2. SVT (AVnRT)
- 3. VT (ventricular tachycardia)
- 4. Atrial Fibrillation



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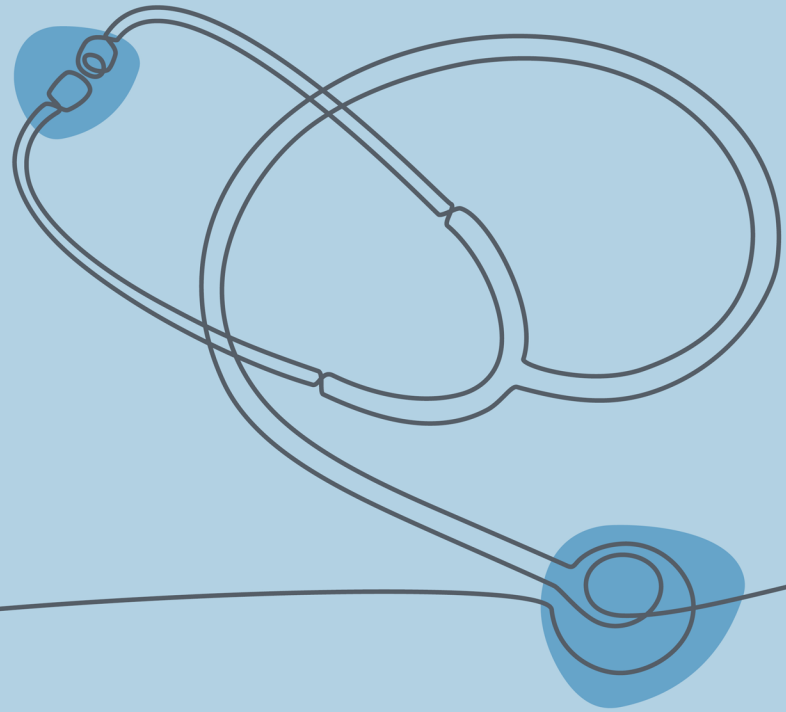
Championing Generalism Workshop



A collaborative, multi-disciplinary and multi-specialty learning opportunity for GPs covering conditions commonly managed in primary care

Vaccination Update

A/Prof Michael Nissen | Senior Staff Specialist, QASIS & Director of Research, TPCH

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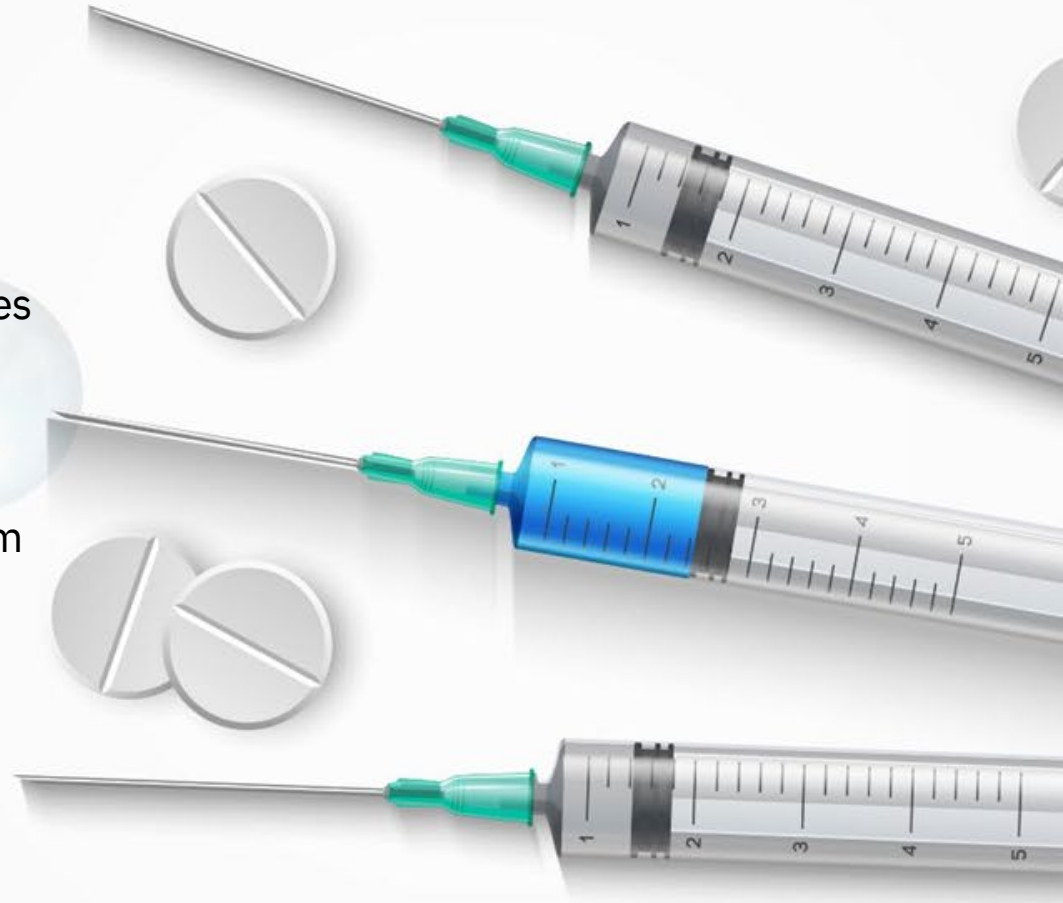
Vaccination Case-Study

- 65 year old female
- Newly arrived from rural Victoria. Recently retired school-teacher who has moved to Brisbane to be closer to her grandchildren and assist with child-care.
- She is seeing you today to make sure that she is up to date with her vaccines so she and her grandchildren (3 months-11 years of age) are protected.
- She doesn't have a GP hand-over letter yet only having arrived 3 days ago, but tells you that she is being treated for high blood pressure, diabetes from being overweight, high cholesterol. She is a ex-smoker and a heart stent placed 5 years ago.
- She had a flu and CoVID-19 vaccination last in 2023.
- What would you do to update her vaccination status today?
- What vaccines would you advise her to have and give in the future?



Vaccination Case Study Questions?

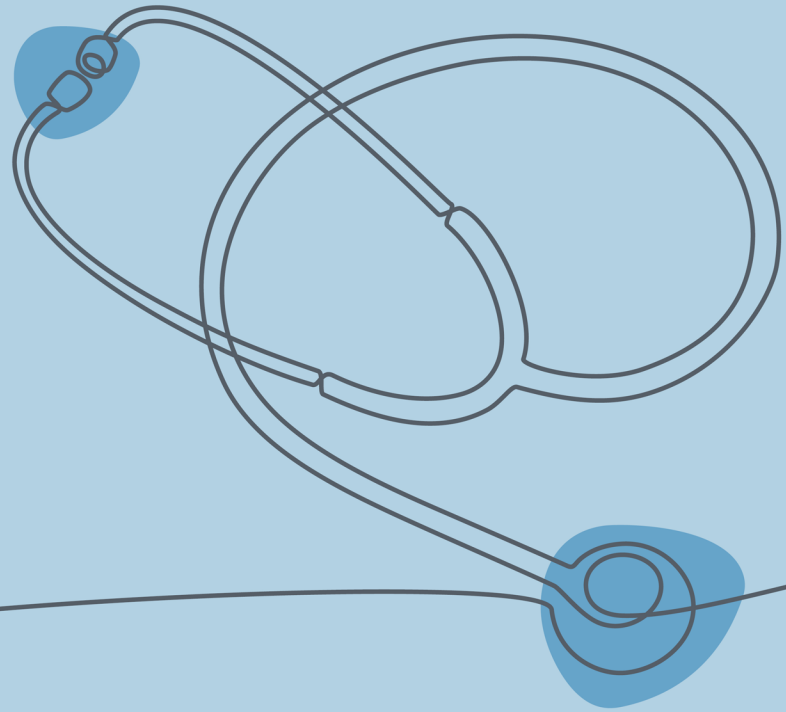
- Q1. What vaccines “could” you recommend today?
- A. Influenza &
- CoVID-19 booster
- B. Pneumococcal vaccine
- C. Pertussis
- D. RSV
- E. All of the above

- Q2. Which of these vaccines should you avoid giving together and why?

General Practice Liaison Officer Program presents

Championing Generalism Workshop

A collaborative, multi-disciplinary and multi-specialty learning opportunity for GPs covering conditions commonly managed in primary care



OSA & Driving

Dr George Tay | Sleep Physician, TPCH

phn BRISBANE NORTH
An Australian Government Initiative

Queensland Government
Metro North Health

Championing Generalism Case Study:

OSA & Fitness to Drive

George Tay

8th June 2024

Disclosure

- Sleep Physician, TPCH
- Sleep Physician, GCUH
- Sleep Reporting, MySleep
- Researches Collaborations & Grants:

THE COMMON GOOD
THE PRINCE CHARLES HOSPITAL FOUNDATION

Fisher & Paykel HEALTHCARE

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

ResMed

Learning Objectives

- OSA in relation to driving
- Assessing safe driving
- Sleep Specialist Referral

Case Study

42 y.o gentleman post discharge from hospital.

Fall asleep behind wheel after night shift.

MVA and sustained traumatic multiple ribs fracture and right sided pneumothorax.

...

GP please follow up.

So what do you want to know?

Additional history:

- Ethnicity and BMI
  - South American gentleman
  - BMI 18.1, Wt 48kg, Ht 164cm
- Occupation
  - Works as luggage handler for an airline
  - Standard C Class driving license
- PMHx:
  - Systemic Hypertension – 170/80
  - No regular medication
  - No substance/stimulants use

- Previous driving & work concern
  - Nil
- Sleep pattern & restriction
  - Sleep time: 0330am to 0630am, Nap 1300-1500.
  - Short sleep latency
- OSA related symptoms
  - Mild snoring
  - Denies witnessed apnoea, gasping arousals
  - No cataplexy or dream enacting behaviour
- Evaluating Sleepiness
  - Epworth Sleepiness Scale (ESS) 10/24
  - History

Epworth Sleepiness Scale

Scale

0= No chance of dozing 1= Slight chance of dozing 2= Moderate chance of dozing 3= High chance of dozing

How often do you doze?

Sitting and reading	0	1	2	3
Watching television	0	1	2	3
Sitting in a public inactive place (theater or meeting)	0	1	2	3
Riding in a car for one hour without a break (as a passenger)	0	1	2	3
Lying down in the afternoon when circumstances permit	0	1	2	3
Sitting and talking to someone	0	1	2	3
Sitting quietly after lunch, without alcohol	0	1	2	3
Stopped in traffic for a few minutes	0	1	2	3

Total _____

*Assessing sleepiness, recent last few weeks, answer all questions, subjective

0 – 10 = "normal"
11 – 15 = Mild to Moderate level of Sleepiness
>/= 16 = Excessive level of Sleepiness

Odds Ratio (OR) of Asleep Crashes

[1]Stutts et al AAA Foundation 1999 [2] Connor et al BMJ 2002;324:1125-29

- Night shift/work[1,2] 0.9 - 13.6x
- Sleep duration (<5hours)[1,2] 2.7 - 7.6x
- Hours awake before crash[1]
  - 15-19hours 9.4x
  - 20+ hours 56.6x
- ESS
  - 11-15[1] 4.2x
  - >15[1,2] 0.7-15.2x
- OSA symptoms 1.4x

Risk for MVA with OSAS

[3] George et al, AJRCCM 1996;154:175-181 [4] Horstmann et al Sleep 2000; 23:383-9

- Stated risk is somewhere between 2-7 times control rates
- There are methodological flaws in many of the studies
  - retrospective nature
  - Many confounders such as driving exposure not controlled for
- How does the OSAHS risk compare with other risk factors?
  - Equal in magnitude to
    - young driver
    - driving at night
    - BAC > 0.05
- Is the risk for MVA uniform across all patients with OSAS?
  - No, greatest risk in severe disease AHI >34[4], AHI>40[3]

Commercial Vehicle Drivers

[5] *Pack et al, Ann Inter Med* [6] *Australian Transport Workers Sleep Health study*

- Increased fatality rates and cost
- Multiple risk factors
  - increased driving exposure
  - circadian rhythm issues
  - sleep deprivation
    - 13.5% of drivers average < 5 hours/night
    - 35.3% average < 6 hours/night
  - substance/drug
  - concomitant sleep disorders
    - potentiating effect of sleep deprivation on OSAS
    - increased prevalence of OSAS

Summary

- Fall asleep crashes result in severe injury = alcohol related crashes
- On a population basis, simple countermeasures could prevent 19% of accidents by avoiding ≥ 1 of the following:
  - avoid driving if sleepy, don't drive between 2-5am, ensure >5 hours sleep in previous 24 hours
- Severe OSAS is associated with increased risk of MVA with some caveats
  - risk = night driving, BAC >0.05 or young driver
  - MVA/year is reduced by CPAP
- Commercial drivers
  - MVAs are more serious
  - Increased prevalence of OSAS
  - Whether this equates into more MVAs uncertain

Sleep Study – Polysomnography (PSG)

- Level 1 – in laboratory, cohort esp NMD, Borderline SpO2, Narcolepsy/RBD, significant cardiac/respiratory disease (TcCO2/video)
- Level 2 – at home, high pretest probability
- Level 3 – limited channel, variable, reserved for remote region.
- Level 4 – e.g. oximetry

*Actigraphy

Referral

- NMD, Resp/Cardiac, Narcolepsy/IHS/RBD
- Driving concern
- Commercial license

- Clinical Score (OSA50/STOPBANG) & ESS
- License type
- Driving concern
- Sleep Study and/or CPAP data
- Significant PMHx

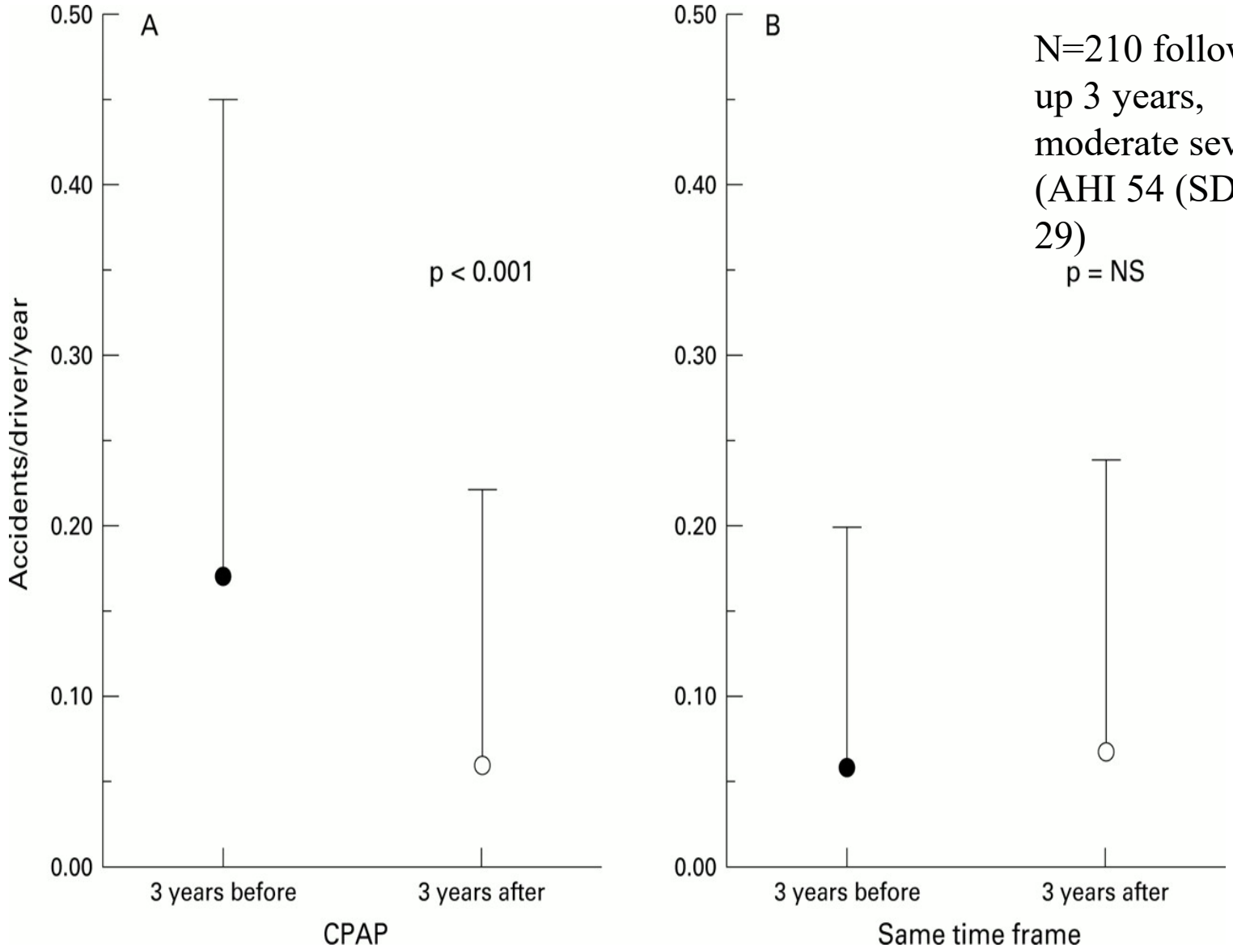
Who to treat?

Does treating OSA help with Sleepy Driving?

Who should trial treatment for OSA?

- Initial assessment (pre-PSG)
  - Reason for assessment, symptoms, sleepiness
- Severe OSA
- Severe COPD
- Poor nocturnal oxygenation and/or sleep disruption
- Driving concern/License status

Does Treating OSAS Reduce Accident Rates?

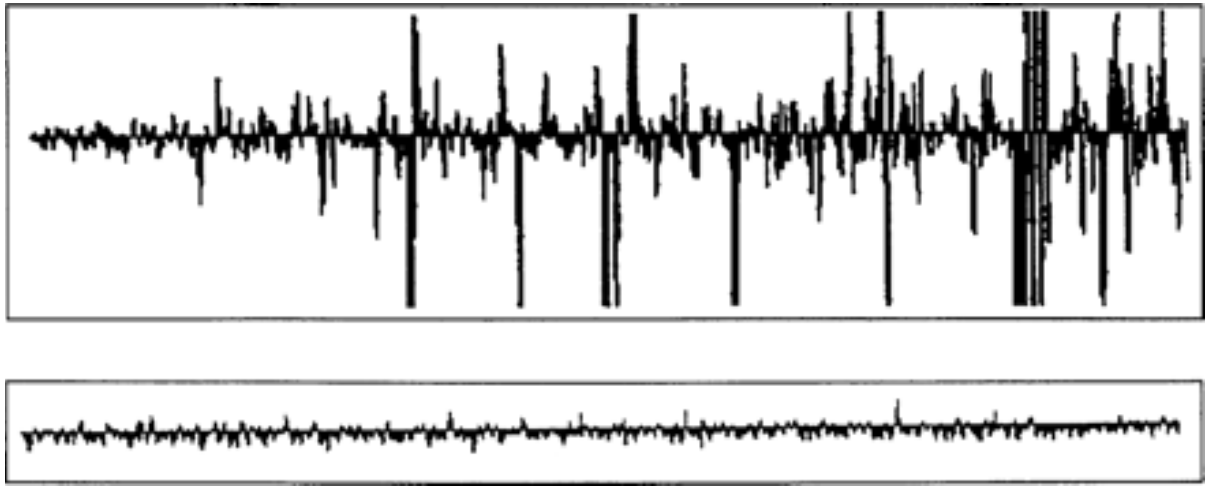


N=210 follow up 3 years, moderate severe (AHI 54 (SD 29)

George et al Thorax 2001;56:508-12

Simulated Driving

Hack et al Thorax 2000



Steering accuracy

- Baseline

-Therapeutic CPAP

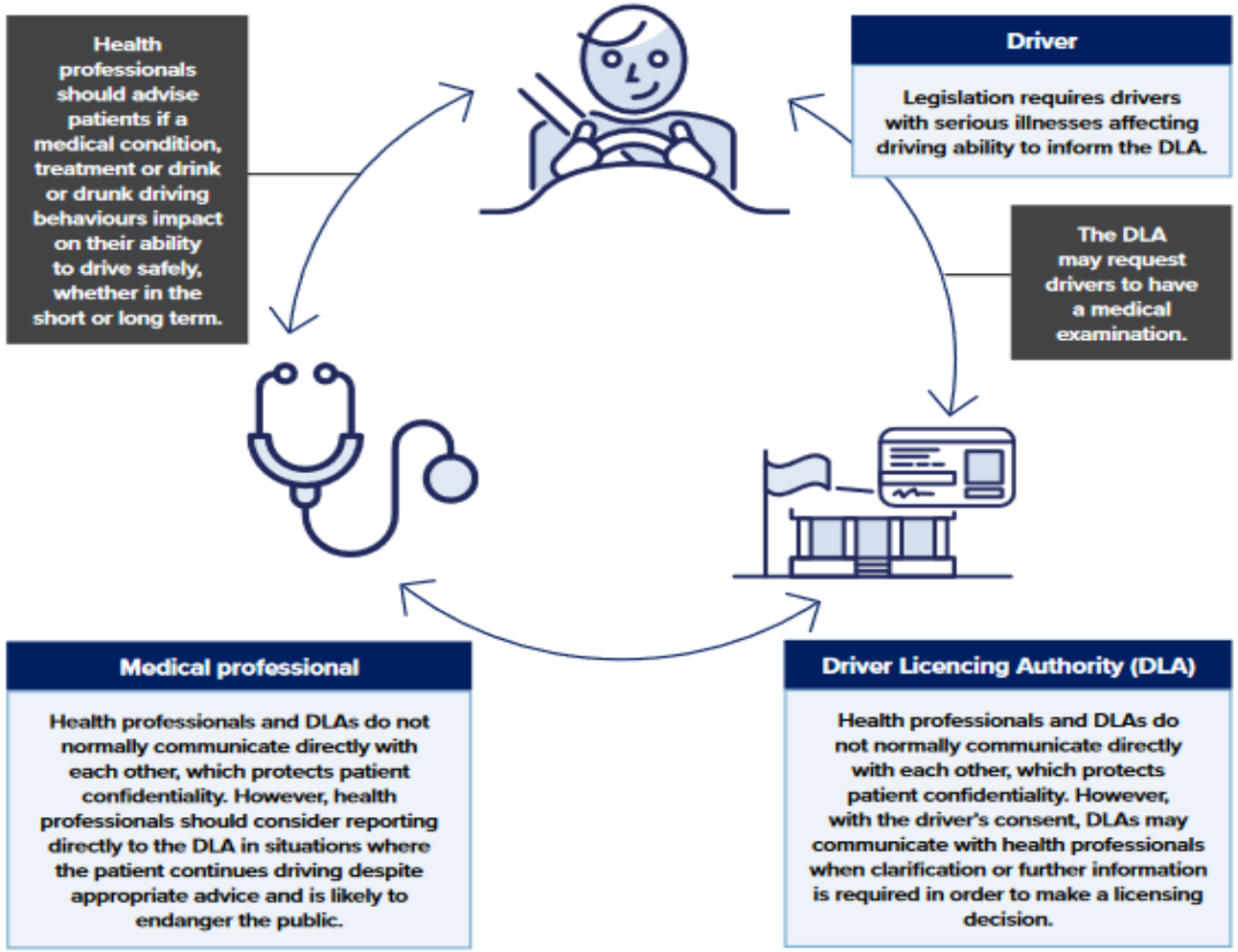
----------30 mins----------

Sham controlled RCT of CPAP in severe OSA

Mandibular Advancement Devices

- Demonstrated to:
  - decrease daytime hypersomnolence
  - improve vigilance
  - BUT
    - have not been subjected to any trials looking at effect on accident rates

Figure 2. The relationships and interactions between the driver licensing authority, health professional and vehicle driver



https://austroads.com.au/__data/assets/pdf_file/0037/498691/AP-G56-

National licence class		Applicable standard
Motorcycle (R) 	Motorbike or motortrike	Private standards apply **unless** the driver holds or is applying for an authority to carry public passengers for hire or reward, in which case the commercial standards apply.
Car (C) 	Vehicle not more than 4.5 tonnes GVM (gross vehicular mass) and seating up to 12 adults including the driver	Private standards apply **unless** the driver: • holds or is applying for an authority to carry public passengers for hire or reward (e.g. taxi driver) • is undertaking a medical assessment as a requirement under an accreditation scheme • holds or is applying for an authority to hold a dangerous goods driver licence • holds or is applying to hold authority to be a driving instructor (may vary between jurisdictions). In these cases the commercial standards apply.
Light rigid (LR) 	Any rigid vehicle greater than 4.5 tonnes GVM or a vehicle seating more than 12 adults that is not more than 8 tonnes, plus a trailer of no more than 9 tonnes GVM	
Medium rigid (MR) 	Any two-axle rigid vehicle greater than 8 tonnes GVM, plus a trailer of no more than 9 tonnes GVM	Commercial standards apply at **all** times.
Heavy rigid (HR) 	Any rigid vehicle with 3 or more axles greater than 8 tonnes GVM, plus a trailer of no more than 9 tonnes GVM	
Heavy combination (HC) 	Prime mover + single semitrailer greater than 9 tonnes GVM and any unladen converter dolly trailer	
Multiple combination (MC) 	Heavy combination vehicle with more than one trailer	

https://austroads.com.au/__data/assets/pdf_file/0037/498691/AP-G56-22_Assessing_Fitness_Drive.pdf

Miscellaneous: certification requirements of the authorising body, as required by specific industry standards eg train drivers, ubers, dangerous occupations

A person is **not** fit to hold an **unconditional licence**:

- if the person has an established sleep apnoea syndrome (sleep apnoea on a diagnostic sleep study and moderate to severe excessive daytime sleepiness*); **or**
- if the person has frequent self-reported* episodes of sleepiness or drowsiness while driving; **or**
- if the person has had motor vehicle crash(es) caused by inattention or sleepiness; **or**
- if the person, in the opinion of the **treating doctor**, represents a significant driving risk as a result of a sleep disorder.

A **conditional licence** may be considered by the driver licensing authority subject to **periodic review**, taking into account the nature of the driving task and information provided by the **treating doctor** as to whether the following criteria are met:

- the person complies with treatment; **and**
- the response to treatment is satisfactory.

** The treating doctor should not rely solely on subjective measures of sleepiness such as the Epworth Sleepiness Scale to rule out sleep apnoea. Refer to section 8.2.3. Sleep apnoea.*

Emphasises syndrome

Sleepiness arbitrary, ESS >15

Subjective

Definition based, self-reporting

Contentious as to who this would apply to

Duration of treatment ?2/52, 4/52

Mean usage ? 2.8 or 4 hrs

Normalisation of ESS? or ESS <15?

Absence of ongoing driving issues

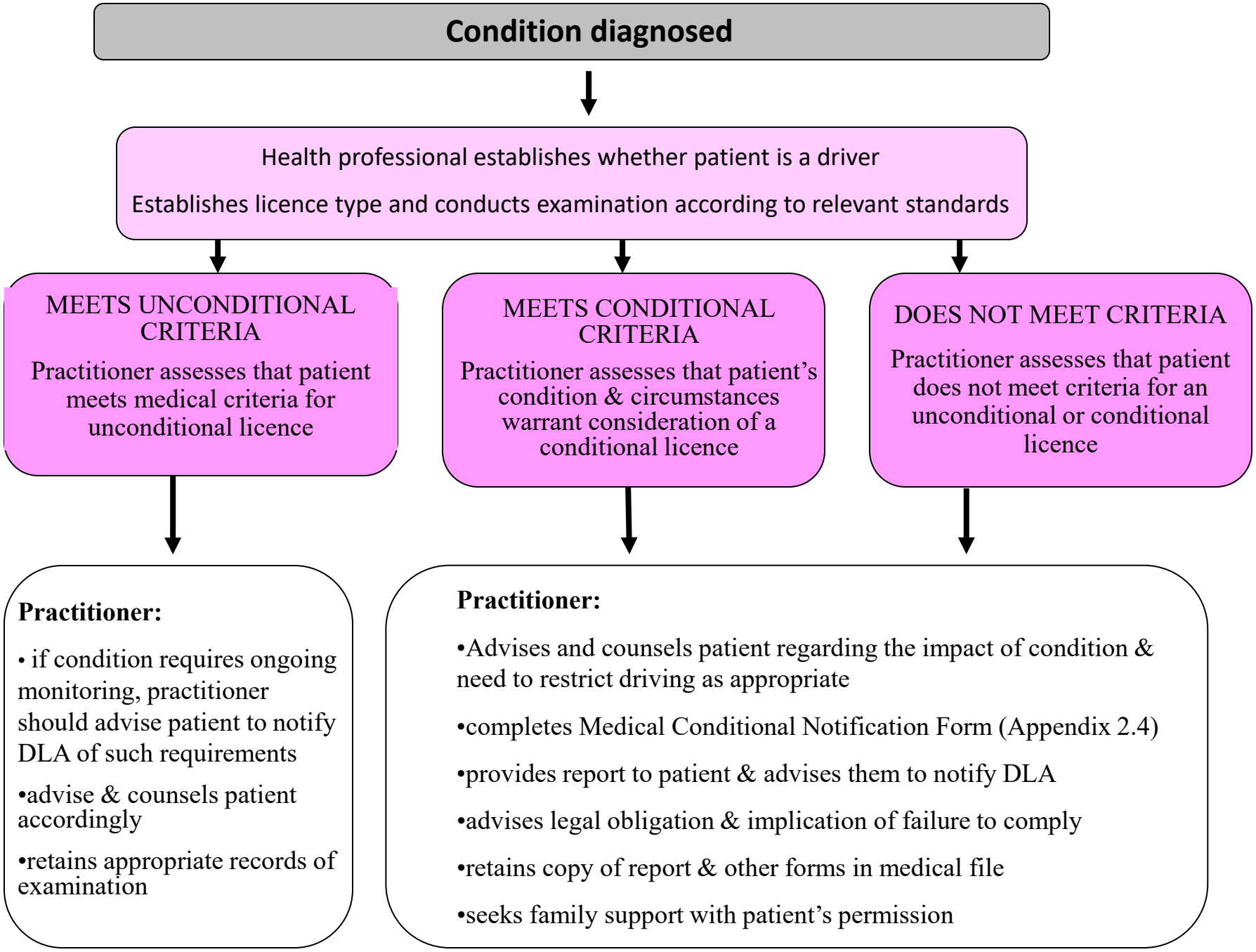
https://austroads.com.au/__data/assets/pdf_file/0037/498691/AP-G56-22_Assessing_Fitness_Drive.pdf

Management

- Advises and counsels patient regarding the impact of condition & need to restrict driving as appropriate
- Advises legal obligation & implication of failure to comply
- Safe driving: **DON'T DRIVE IF YOU FEEL SLEEPY**

  Before driving:
  - get a good night's sleep
  - avoid driving at times you normally sleep
  - avoid long drives after a day's work
  - Impact of medicine
  - plan ahead – work out rest stops and overnight stops.
- When driving:
  - Coffees
  - take regular breaks – you should stop for at least 15 minutes every 2 hours
  - share the driving if you can
  - use rest areas, tourist spots and driver reviver stops
  - stop and rest as soon as you feel tired
  - never drive for more than 10 hours in a single day

Don't Drive vs Limit Driving vs Ok to Drive


Condition diagnosed
Health professional establishes whether patient is a driver
Establishes licence type and conducts examination according to relevant standards
MEETS UNCONDITIONAL CRITERIA
Practitioner assesses that patient meets medical criteria for unconditional licence
MEETS CONDITIONAL CRITERIA
Practitioner assesses that patient's condition & circumstances warrant consideration of a conditional licence
DOES NOT MEET CRITERIA
Practitioner assesses that patient does not meet criteria for an unconditional or conditional licence
Practitioner:
• if condition requires ongoing monitoring, practitioner should advise patient to notify DLA of such requirements
•advise & counsels patient accordingly
•retains appropriate records of examination
Practitioner:
•Advises and counsels patient regarding the impact of condition & need to restrict driving as appropriate
•completes Medical Conditional Notification Form (Appendix 2.4)
•provides report to patient & advises them to notify DLA
•advises legal obligation & implication of failure to comply
•retains copy of report & other forms in medical file
•seeks family support with patient's permission

Conditional (Commercial) Driver Licences

- The opinion of a medical specialist is required for recommendation of a conditional licence
- Reflects the higher safety risk for commercial vehicle drivers
- Regular review of symptoms (ESS) and treatment compliance
- Vigilant study (MWT/MSLT) & Actigraphy

- Esp in rural or remote areas:
  - initial assessment & recommendation for licence by a specialist
  - ongoing periodic review for conditional licence is provided by treating GP or another physician with the approval of the original specialist

Useful resources

Ausroad Fitness to Drive Guidelines:

https://austroads.com.au/drivers-and-vehicles/assessing-fitness-to-drive

Medical Condition Notification Form:

https://austroads.com.au/__data/assets/pdf_file/0032/499343/AFTD2022_Medical_condition_notification_form.pdf

QLD Transport Conditional License F3712:

https://www.support.transport.qld.gov.au/qt/formsdat.nsf/forms/QF3712/$file/F3712_CFD.pdf

MN (RBWH and TPCH) Referral:

https://metronorth.health.qld.gov.au/specialist_service/refer-your-patient/sleep-medicine

Question 1

The following are true about OSA, except:

a) Obesity is a known risk factors for OSA

b) Most people who snore do not have OSA

c) Treatment includes modifying risk factors

d) Oxygen therapy is a therapy for OSA

Question 2

Which of the following is true:

a) There is no relationship between one's sleep and work schedule and risk of being involved in a drowsy-driving crash.

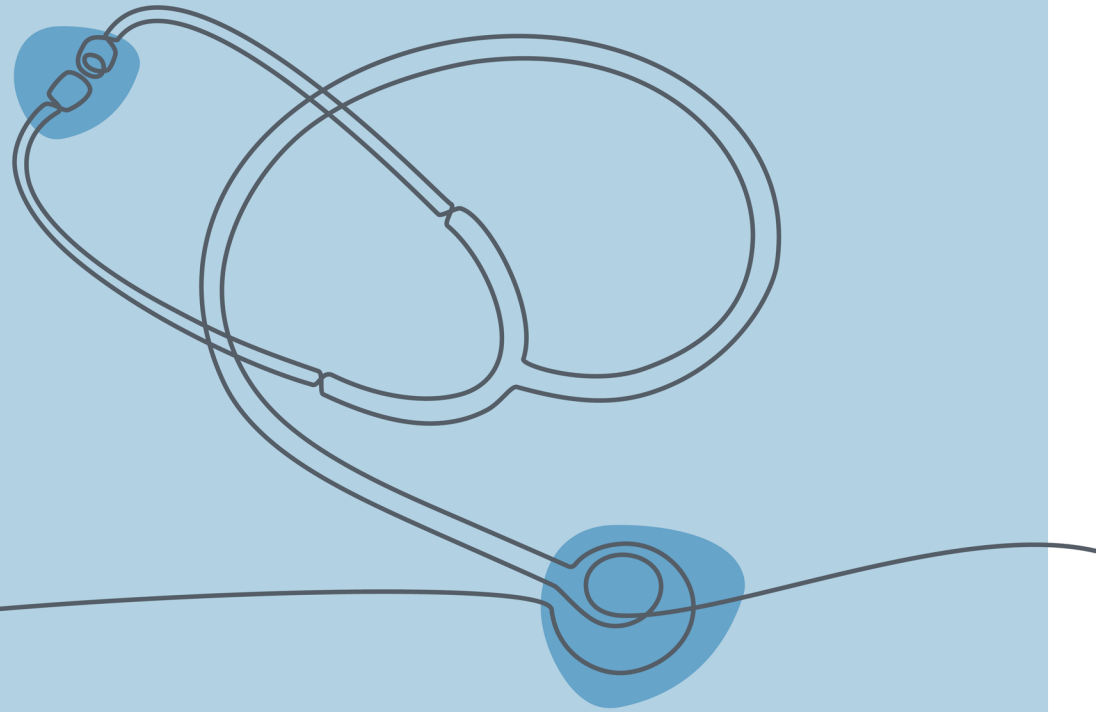
b) The largest at-risk group for sleep-related crashes is commercial drivers.

c) People with severe OSA have about the same risk as the general population of being involved in a drowsy-driving crash.

d) Wandering, disconnected thoughts are a warning sign of driver fatigue.

General Practice Liaison Officer Program presents

Championing Generalism Workshop



A collaborative, multi-disciplinary and multi-specialty learning opportunity for GPs covering conditions commonly managed in primary care

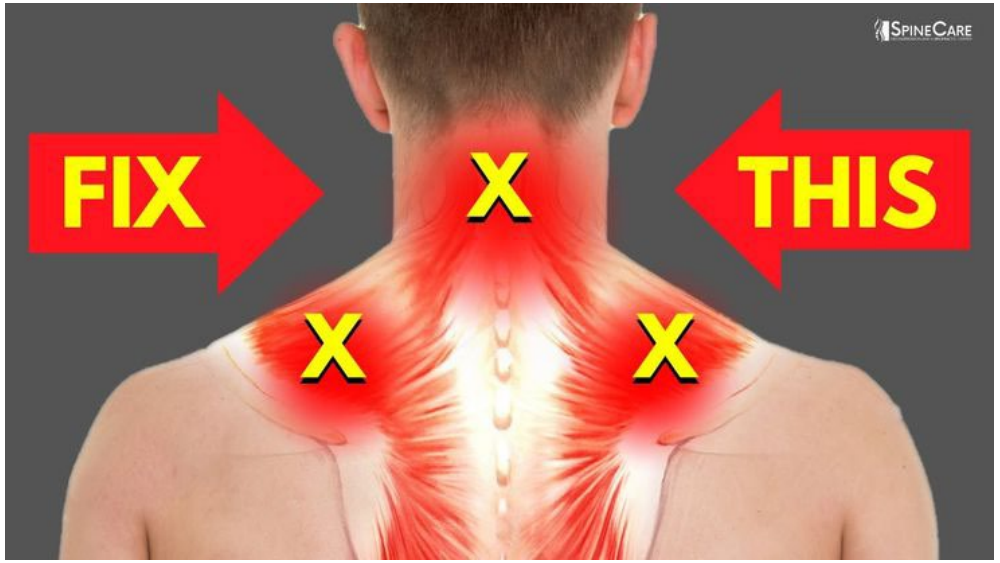
Sore Shoulders

Amy Pappinniemi| Specialist Musculoskeletal Physiotherapist, MPSC
Dr Aravi Loganathan | Rheumatologist, Redcliffe Hospital
Dr James Martin | GP & GPLO

phn BRISBANE NORTH
An Australian Government Initiative

Queensland Government
Metro North Health

- Amy Pappinniemi
  - Specialist MSK Physiotherapist, MPSC
- Dr Aravi Loganathan
  - Rheumatologist, RDH
- Dr James Martin
  - GP / GP Liaison



Sore Shoulders

A Collaborative Case Study

Shoulder Pain in GP

- 3rd most common musculoskeletal issue
- 1.3% of presentations (>1 a week!)
- Lots of causes, can be multiple…
- Shoulders are complicated.

Mrs S

- 71yo retired decorator from Redcliffe
  - “Always had bad shoulders…”
  - “…now I can’t pick up my great-grandson”
- Went to “GPs ‘R’ Us” last month
  - “They did some tests… haven’t you got them?”
  - Paracetamol, ibuprofen and rest
  - “…but they’re getting worse!”
  - “Oh – I’m seeing the physio later…”

- What next?

Your long-suffering receptionist retrieves…

- Pathology including:
  - CRP – 8, ESR – 28. E/LFT - N, FBC – N
- Radiology:
  - Bilateral shoulder X-ray
    - Moderate OA changes AC joints
    - Mild OA changes GH joints R>L
    - Soft tissue calcifications both sides
  - R shoulder US
    - Multiple tendon calcifications
    - Supraspinatus tear
    - Subacromial bursa tenderness on probe pressure

Shoulder History

Key questions asked to obtain a thorough patient history during a shoulder examination.

Comprehensive History

Taking a comprehensive patient history is crucial for guiding the shoulder examination, identifying potential causes of symptoms, and developing an effective treatment plan.

General Health

Considering age, risk factors for shoulder issues, lifestyle factors like smoking, sleep quality, recreational activities, and nutritional habits.

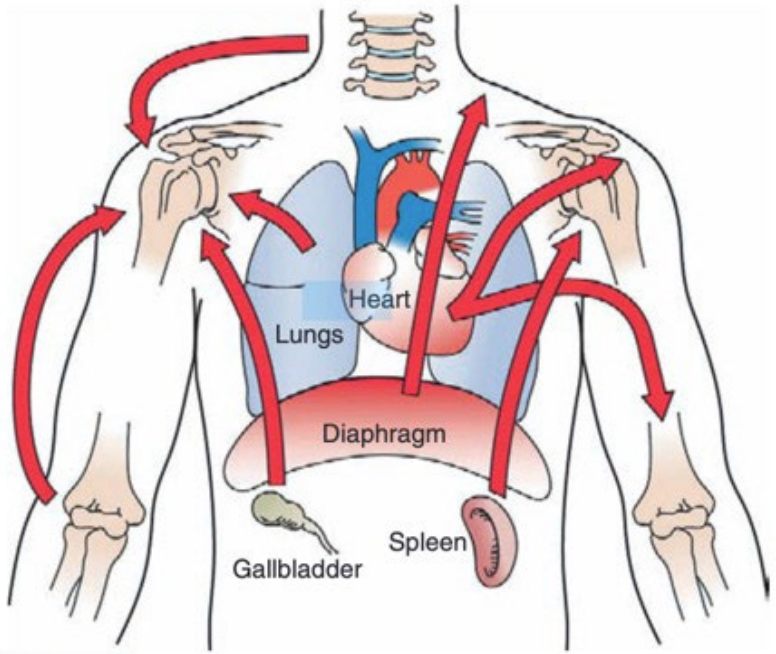
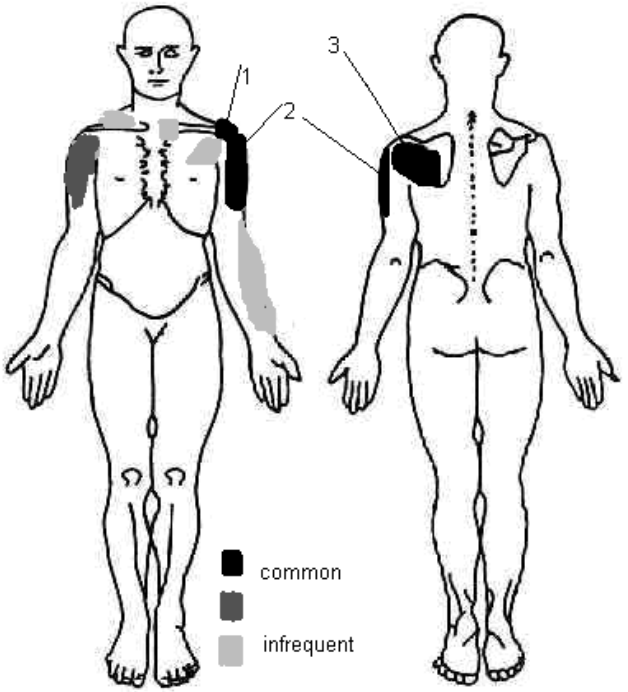


Fig. 18-2 Musculoskeletal and systemic structures referring pain to the shoulder.

Goodman, C., et al (2013). Chap 18. In Differential diagnosis for physical therapists (pp. 713-740).



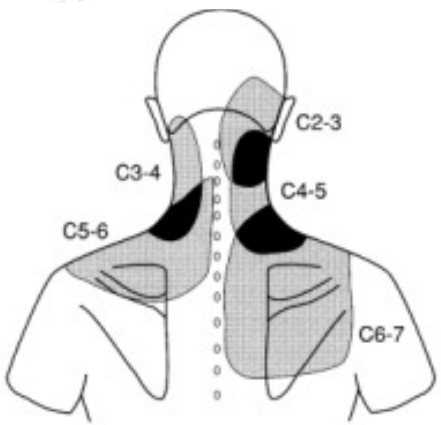
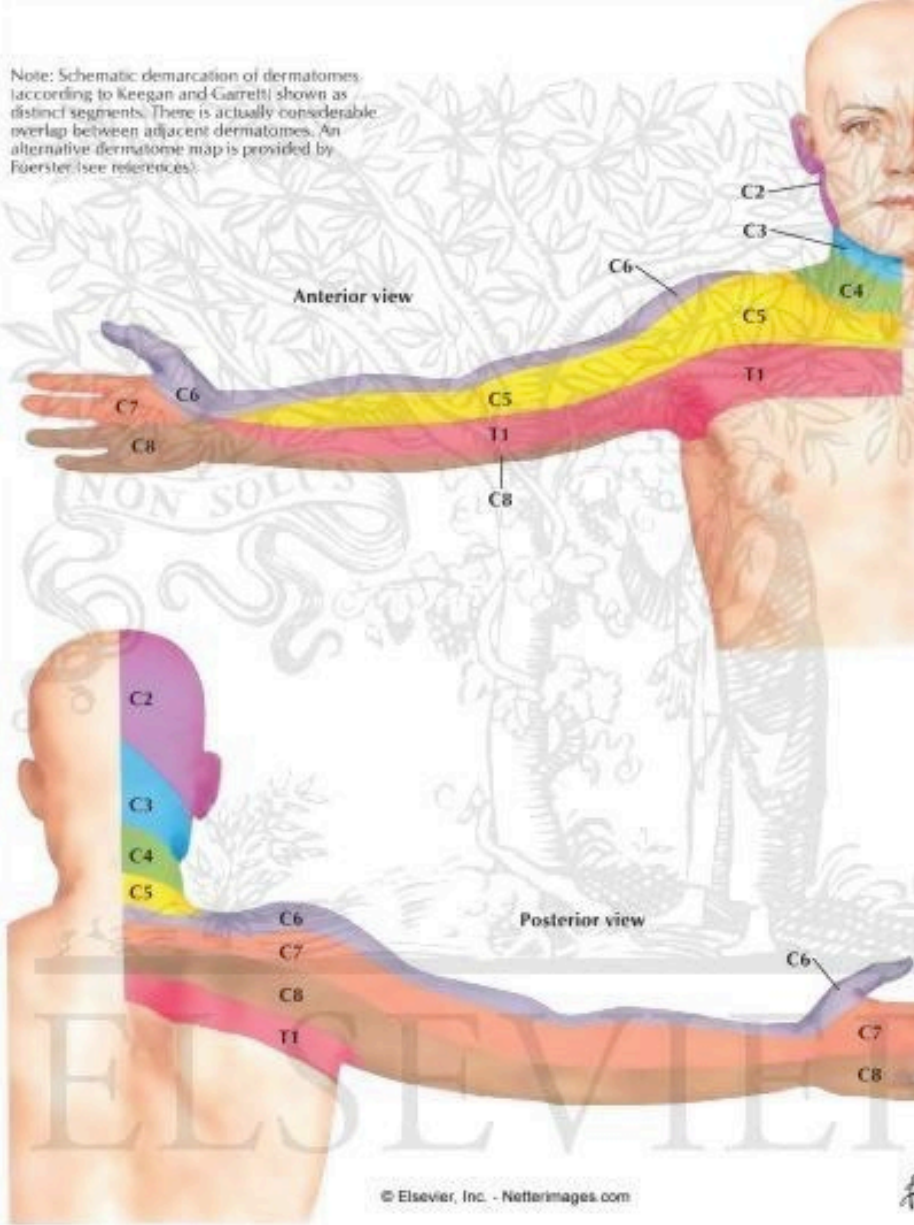


FIGURE 2

Pain Referral Patterns from Cervical C2-3 through C6-7 Facet Joint Injections. Shaded areas indicate areas of pain experienced by asymptomatic volunteers after injection of facet joints C2-3 through C6-7. (From Dwyer AB, Aprill C, Bogduk N. Cervical zygapophyseal joint pain patterns. I: A study in normal volunteers. Spine 1990; 15:453–457.)



Trauma History

Understanding previous injuries, dislocations, surgeries, and trauma to determine their impact on the current condition.

Pain Location

Identifying whether pain is widespread, localized, diffuse, or affects multiple sites in the shoulder region.

Pain Characteristics

Describing the type, depth, and consistency of pain, along with a numerical rating scale (NRS) to assess its severity.

Specific Symptoms

Inquiring about specific symptoms such as clicking, locking, giving way, crepitus, weakness, heaviness, dead arm fee...

Aggravating Factors

Identifying activities, movements, or positions that trigger or worsen the symptoms, including load dependency.

24-hour Pattern

Assessing morning stiffness lasting over 30 minutes, nighttime pain, red flags, and any related sleep disturbances.

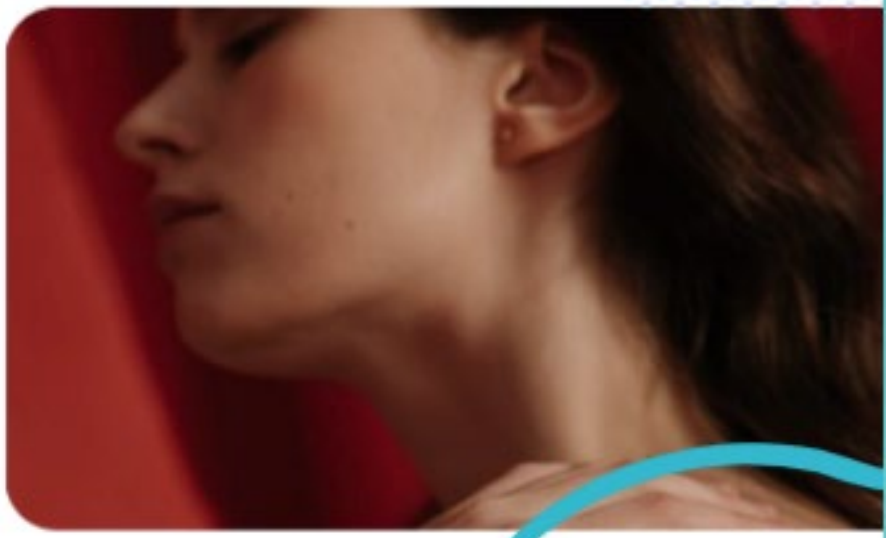
Clinical Exam

1

Palpation

Check temperature, swelling, masses, lumps, deformities, atrophy

(these are usually non-MSK signs)



2

Baseline Pain

Ask about specific pain with
a) neck movement
b) shoulder movement

(This will help you include or exclude neck)

Clinical Exam

3

Shoulder range (active)

Full ROM but pain through ROM

- not a 'stiff' frozen shoulder
- unlikely OA
- most likely RCRP

Full ROM with crepitus

- likely OA but can also consider overlying RCRP

If lacking ER

- more likely frozen shoulder

4

Shoulder range (passive)

If passive and active range the same

- likely OA

Full ROM

- but really painful, irritable, negative shoulder exam and inconsistent pain, consider inflammatory
- if pain free likely RCRP

Impingement tests like Hawkins Kennedy, Neer's have low diagnostic accuracy

Empty/full can tests (supraspinatus) do not selectively isolate supraspinatus

Have moved more toward cuff integrity tests looking for pain +/- weakness with resisted movements of abduction, internal rotation and external rotation

Spontelli Gisselman, A. et al (2022). Chap 26. In The Shoulder: Theory and Practice (pp.389-403).

Clinical Exam

5

Strength Testing

Internal rotation:
- Belly press, Gerber's lift off
(subscapularis)

External rotation:
- ER lag sign, Speed's test
(supraspinatus and infraspinatus)

Requejo-Salinas, N. et al (2022). Braz J of Phys Ther, 100395.
Boettcher, C. et al (2009). J Sci Med Sport, 12: 435-9.
Hegedus, E. et al (2012). BJSM. 46(14): 964-978.

Spontelli Gisselman, A. et al (2022). Chap 26. In The Shoulder: Theory and Practice (pp.389-403).

6

Strength Testing

Biceps:
- Yergason's, biceps load, upper cut
(biceps)

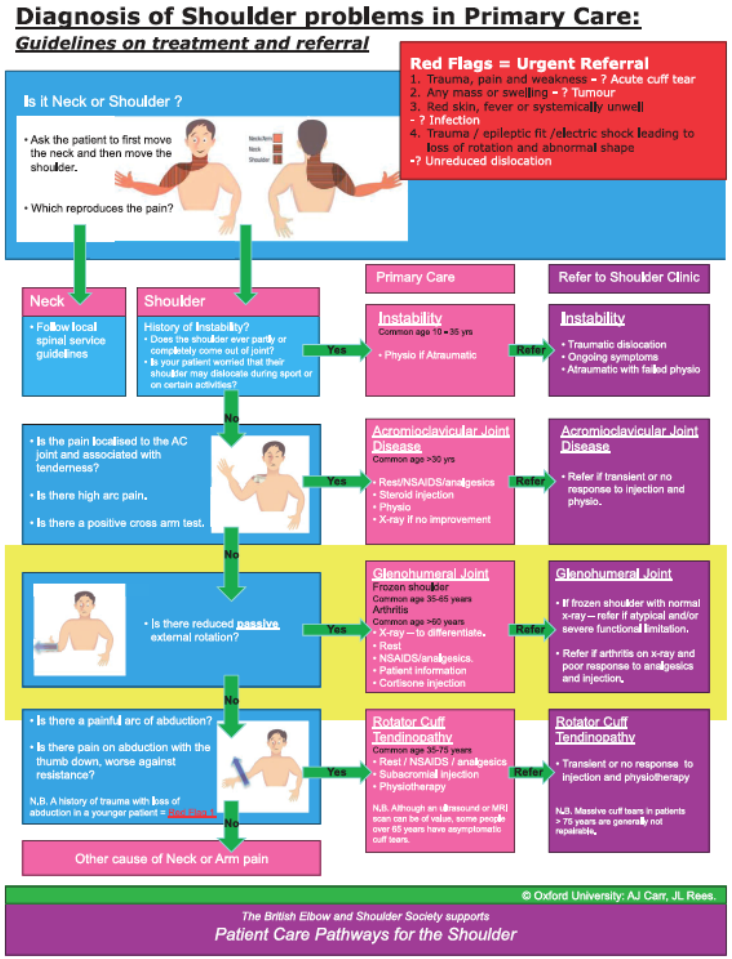


Figure 1. Diagnosis of shoulder problems in primary care. Guidelines on treatment and referral.

M MISCELLANEOUS

Shoulder & Elbow

Shoulder & Elbow
2015, Vol. 7(4) 299–307

DOI: 10.1177/1758573215601779
sel.sagepub.com
SAGE

BESS
Excellence through knowledge

BESS/BOA Patient Care Pathways

Frozen Shoulder

Amar Rangan, Lorna Goodchild, Jo Gibson, Peter Brownson, Michael Thomas, Jonathan Rees and Ro Kulkarni

Mrs S - update

- “Amy, the physio, was great but my shoulders are just as bad!”
- “She wrote me a note to pass on to you about maybe it being *polymyalgia*. What’s that?”

What is PMR?

- Polymyalgia rheumatica is an inflammatory disorder causing muscle pain and stiffness
  - PET – FDG Avid uptake affecting shoulder/hip girdle (periarticular) and interspinous bursa
- Primarily affects adults over 50, more common in women
- Likely involves genetic and environmental factors
- 30% of PMR patients may develop GCA

History

- Sudden onset 1-2 weeks, “woke up one morning”
- Proximal distribution
- EMS – difficulty with ADLs in the morning and nocturnal symptoms (can wake at night)
- GCA symptoms/B-Symptoms
- Peripheral inflammatory arthritis symptoms
- Assess for mimics
  - Will discuss later
  - In primary care - diagnosis of exclusion

Clinical Exam & Investigations

Exam

- Shoulder exam
- Assess for peripheral arthritis
- Based on history!!!

Investigations

- Clinical Diagnosis – serology generally excludes other pathology
- Imaging
  - US – bursitis
- Elevated CRP/ESR
  - CRP >3x ULN
- Autoimmune serology – CCP/RF/ANA
- Blood cultures?
- Malignancy screens?

Mimics

- Inflammatory arthritis (RA, PsA, seronegative arthritis)
- Giant Cell Arteritis/Extra-cranial large vessel vasculitis
- Osteoarthritis/Soft-tissue – Mechanical Arthralgia
- Hypothyroidism
- Inflammatory myositis – DM/PM/statin-induced myopathy
- Paraneoplastic
- Connective tissue disease (SLE etc)

First Steps

Critical to not misdiagnose another pathology as PMR i.e. RA, thyroid

Initial review should focus on excluding other pathologies

Does not necessarily mean steroids should be delayed

In the absence of GCA symptoms, would obtain CRP/ESR first as difficult to assess later

Prednisone – 15mg once a day – slow wean

- 2.5mg every 2-4 weeks until on 10mg
- Then reduce by 1mg a month
- CRP/ESR monitoring - optional

Pitfalls

- Persisting with Prednisone/increasing the dose to 25-30 if suboptimal response
  - PMR sensitive to Pred – 15mg >80-90% improvement
- Patients under the age of 50
  - While criteria 50 – real-world >60
- CRP normal – (at presentation)
- CRP >100 – may be PMR, but always cautious
- Asymmetric presentation
- Hip only, shoulders spared
- Duration of prednisone – and wean
- Not assessing for peripheral arthritis - SPRA

Examples

- 65F in community, independent
- Bilateral shoulder pain and weakness, fevers, weight loss
- CRP 15-20
- Good response initially after that persistent pain >3-6 months and on Pred 15-20mg
- Hospital presentation – persistent fevers
- Tar staining, reduced AE lungs, cough – CXR (shadow)
- CT – metastatic Lung Ca

- 72M Retirement home
- Bilateral shoulder girdle pain – pred 12-18 months 10-12.5mg
- Admitted with falls, arthralgias, difficulty with fine motor movements
- Geriatrics/Rehab
- O/E – swollen joints +++, XR erosions MCP.
  - CCP >100, RhF 50
- Seropositive RA

Request for advice (RFA) – GP Smart Referrals

(Only Redcliffe catchment at this stage)

When unsure – ideally the earlier, the better (harder once patient on pred for >6 months)

Best if DDx – i.e. hypothyroidism, appropriate malignancy screens etc excluded

Can always obtain advice re pred wean

When to refer

- If not confident or unsure of diagnosis – let us know if happy to manage pred in community
- ?role for steroid-sparing agents – i.e. MTX

Specialist Management, New Therapies

Biologic Therapy (not licensed in Australia)

- Tocilizumab – (anti-IL6)
- Secukinumab - (anti-IL17) – not licensed in Australia (trials pending)

DMARD – steroid sparing therapy

- Methotrexate, Leflunomide, Mycophenolate, Azathioprine

Questions and discussion

Misc. references

- https://brisbanenorth.communityhealthpathways.org/18669.htm
- https://www1.racgp.org.au/ajgp/2023/november/chronic-shoulder-pain