

Clinical challenge

These questions are based on the Focus articles in this issue. Please choose the single best answer for each question.

CASE 1

John, a man aged 42 years, has recently returned from an overseas trip with a non-itchy papular rash. He presents for assessment.

QUESTION 1

Which non-infective condition, in addition to drug reactions and haematological disorders, should be considered in this presentation?

- A. Atopic eczema
- B. Cutaneous vasculitis
- C. Guttate psoriasis
- D. Erythema nodosum

QUESTION 2

Following a diagnosis of neurosyphilis, periodic review should be conducted. This should include the review of symptoms, repeat neurological examination and cerebrospinal fluid testing. The first of these reviews could be undertaken how soon after diagnosis?

- A. Three weeks
- B. Three months
- C. Nine weeks
- D. Nine months

QUESTION 3

Which serum tests should be included in the standard sexual health screen of an asymptomatic individual who is not part of an at-risk population?

- A. Hepatitis A serology, hepatitis B serology, hepatitis C serology
- B. Hepatitis B serology, hepatitis C serology, HIV serology
- C. Hepatitis A serology, HIV serology, syphilis serology
- D. Hepatitis B serology, HIV serology, syphilis serology

QUESTION 4

What is the first-line treatment option for syphilis infection?

- A. Intravenous (IV) ceftriaxone
- B. Oral doxycycline
- C. Intramuscular (IM) benzathine benzylpenicillin
- D. Oral metronidazole

CASE 2

Jenny, a pregnant woman aged 28 years, presents with a two-week history of a pruritic rash.

QUESTION 5

The first-line treatment for scabies infestation in a pregnant woman is:

- A. topical benzyl benzoate
- B. oral ivermectin 200 mcg/kg
- C. topical 5% permethrin
- D. topical 0.1% methylprednisolone aceponate

QUESTION 6

Scabies infestation typically presents with persistent itch that is worse at night, with erythematous papules or nodules that have a predilection for intertriginous spaces of the hands, genitalia, breasts and:

- A. knees
- B. buttocks
- C. trunk
- D. elbows

Continued on page 738.



The five domains of general practice

- (D1) Domain 1: Communication skills and the patient-doctor relationship
- (D2) Domain 2: Applied professional knowledge and skills
- (D3) Domain 3: Population health and the context of general practice
- (D4) Domain 4: Professional and ethical role
- (D5) Domain 5: Organisational and legal dimensions

These domains apply to all Focus articles, which are required reading for the Clinical challenge CPD activity.

How to use AJGP for your CPD

Each issue of the *Australian Journal of General Practice (AJGP)* has a focus on a specific clinical or health topic. Many GPs find the entire issue of interest and of relevance to their practice; some GPs find one or more articles in the journal relevant.

You can use *AJGP* for your CPD. If you want to use the entire issue for CPD, you must work your way carefully through each article in the issue and complete the Clinical challenge. When you do this, take time to read the articles carefully and critically, and think carefully about how you might adjust your practice in response to what you have learned.

We recommend that you access *AJGP*, the articles and the Clinical challenge through gplearning (<https://gpl.racgp.org.au/d2l/home>) (Activity ID: 960564). Then, when you complete the articles and the Clinical challenge, your CPD hours are automatically credited to your CPD account. If you work through the full issue of *AJGP* and complete the Clinical challenge, you will receive 14 CPD hours (seven hours' Educational Activities and seven hours' Reviewing Performance).

If you do not want to do the full *AJGP* issue, and you prefer to select one or more articles to read, you can QuickLog the CPD hours directly through your myCPD dashboard. As guidance, each article in *AJGP* would provide 1-2 CPD hours, split half Educational Activities and half Reviewing Performance.



QUESTION 7

Pregnant women who receive antibiotic treatment for syphilis should be advised to report any symptoms suggestive of the Jarisch–Herxheimer reaction. These symptoms include:

- A. hives, angioedema, gastrointestinal symptoms and wheeze
- B. rash, photophobia, neck stiffness and headache
- C. fever, malaise, sweating and headache
- D. vomiting, abdominal pain, fever and diarrhoea

CASE 3

Joan, a woman aged 56 years, attends with progressive unsteady gait and slurred speech for investigation.

QUESTION 8

What is the prevalence of Creutzfeldt–Jakob disease (CJD) in Australia?

- A. One to two cases per 1 million per year
- B. One to two cases per 100,000 per year
- C. One to two cases per 10,000 per year
- D. One to two cases per 1000 per year

CASE 4

Joe, a man aged 42 years, attends to discuss respiratory syncytial virus (RSV) vaccination for himself and his young children after hearing about ‘free RSV vaccines’ on the news.

QUESTION 9

In which adult age group has the currently available Australian respiratory syncytial virus (RSV) vaccines been approved for use, outside the national immunisation program?

- A. 18 years and over
- B. 50 years and over
- C. 60 years and over
- D. 75 years and over

QUESTION 10

How many passive respiratory syncytial virus (RSV) immunisations are currently approved for use in children in Australia?

- A. None
- B. One
- C. Two
- D. Three

These questions are based on the Focus articles in this issue. Please write a concise and focused response to each question.

CASE 1

John, a man aged 42 years, has recently returned from an overseas trip with a non-itchy papular rash. He presents for assessment.

QUESTION 1

List four priority groups for syphilis testing under recommendations from the Australian Society of HIV, Viral Hepatitis and Sexual Health Medicine (ASHM).

QUESTION 2

List four examination findings of secondary syphilis.

QUESTION 3

When examining John, you find he has widespread non-tender lymphadenopathy. Describe a sign of primary syphilis you would examine for next.

QUESTION 4

List the two presentations of early neurosyphilis.

QUESTION 5

If John had travelled to remote areas of Thailand and camped by natural waterways, which tropical infections would you consider investigating for?

CASE 2

Jenny, a pregnant woman aged 28 years, presents with a two-week history of a pruritic rash.

QUESTION 6

Explain the association between scabies and:

- eczema
- acute rheumatic fever.

QUESTION 7

List two differential diagnoses for crusted scabies lesions.

CASE 3

Joan, a woman aged 56 years, attends with progressive unsteady gait and slurred speech for investigation.

QUESTION 8

List six neurological presentations of progressive Creutzfeldt–Jakob disease.

CASE 4

Joe, a man aged 42 years, attends to discuss respiratory syncytial virus (RSV) vaccination for himself and his young children after hearing about ‘free RSV vaccines’ on the news.

QUESTION 9

Summarise the reason for the recommendation by the Australian Technical Advisory Group on Immunisation (ATAGI) to delay maternal RSV vaccination to the third trimester.

QUESTION 10

Describe how the current state-specific respiratory syncytial virus (RSV) prevention program differs from conventional immunisation programs.

September 2024 Multiple-choice question answers

ANSWER 1: A

Ipilimumab, a CTLA-4 inhibitor, was the first immune checkpoint inhibitor to be approved.

ANSWER 2: D

Nearly half of all patients with melanoma have tumours that carry the BRAF mutation, a gene involved in a critical cell growth signalling pathway.

ANSWER 3: C

One year of postoperative therapy with anti-PD-1 agents or BRAF/MEK inhibitors reduces recurrence risk of stage III melanoma, with regional lymph node or in-transit metastases, by roughly half.

ANSWER 4: D

Approximately 70% of Australians are expected to have at least one basal cell carcinoma or cutaneous squamous cell carcinoma excised in their lifetime.

ANSWER 5: A

OncoBeta epidermal radioisotope therapy using the beta emitting rhenium-188 radioisotope is applied as a paste.

ANSWER 6: A

Difficult-to-image areas include skin folds, the groin and acral surfaces.

ANSWER 7: A

Patient characteristics that might be used by artificial intelligence in creating personalised treatment plans include age, sex, comorbidities and use of medications.

ANSWER 8: A

The melanoma overdiagnosis definition specifically excludes 'false-positive results; that is, a positive test in an individual who is subsequently recognised not to have cancer'.

ANSWER 9: C

The group of practitioners that manages the highest number of melanomas is general practitioners.

ANSWER 10: C

General practitioners who subspecialise in skin cancer management excise 50% fewer benign lesions for each melanoma detected compared to generalist colleagues.

September 2024 Short answer question answers

ANSWER 1

Immune checkpoints are receptors in the immune system that can turn down a signal (inhibiting the immune response). The blockade of these checkpoints enables the body's immune system to attack cancer cells more effectively.

ANSWER 2

The five most common systems affected by immune-related adverse events during treatment with immune checkpoint inhibitors are:

- cutaneous
- gastrointestinal
- endocrine
- pulmonary
- musculoskeletal systems.

ANSWER 3

The symptoms and/or signs associated with initial immune checkpoint inhibitor treatment that could suggest rare, but potentially life-threatening, toxicity are: ptosis, fatigue and myalgia.

ANSWER 4

Volumetric modulated arc therapy (VMAT) works by rotating around the patient to deliver radiation in a continuous arc with the dose shaped and modulated in real time by multileaf collimators to achieve unmatched precision.

ANSWER 5

Eight indications for a general practitioner to consider referral for radiotherapy in keratinocyte cancer are:

- persistent or recurrent lesions
- positive margins following surgery (adjuvant)
- perineural invasion of multiple nerves, or a single nerve >0.1 mm (adjuvant)
- immunocompromised patient (adjuvant)
- comorbidities that preclude surgery
- patients who decline surgery
- concerns about cosmetic or functional outcomes from surgery
- extensive skin field cancerisation that has failed prior interventions.

ANSWER 6

3-D total body imaging with dermoscopy creates an Avatar of the patient's skin and body map of naevi. These machines have in-built artificial intelligence that have developed AI mechanisms to: (i) determine whether a lesion has reached the threshold for a diagnostic biopsy; and (ii) identify dermatoscopic changes by comparing serial photographs sequentially.

ANSWER 7

Six possible future applications for artificial intelligence in the diagnosis and treatment of melanoma are:

- screening
- early detection
- personalised treatment plans
- early diagnosis of recurrence
- automation in pathology
- telemedicine and remote diagnosis.

ANSWER 8

The definition of melanoma overdiagnosis is the treatment of melanomas that are slow growing or otherwise biologically indolent, to the extent that they would not harm the patient.

ANSWER 9

The potential harms of melanoma overdiagnosis include costs of treatment and more frequent follow-up; treatment-associated morbidity including discomfort and scarring; and related issues of anxiety and psychological stress impacting quality of life. There are also financial burdens of work time lost and potential difficulties obtaining insurance. More broadly, there is the opportunity cost burden on the health system.

ANSWER 10

A reduction in excess deaths in geographical regions with the highest rates of melanoma diagnosis in Australia has been found.