A 23-year-old female presents with a problem with her nails. Over the last two months they have become rather unsightly and brittle. She has taken a selection of medications for acne.

Examination reveals onycholysis.

Which of the following preparations is most likely to be responsible for the onycholysis?

(Please select 1 option)

- Dianette  Incorrect answer selected
- Erythromycin
- Isotretinoin
- Tetracycline  This is the correct answer
- Topical benzoic acid

Tetracycline is a recognised cause of onycholysis together with eczema, psoriasis, and thyrotoxicosis to name but a few.
Work Smart

Question 3 of 63

Which of the following is aggravated by exposure to sunlight?

(Please select 1 option)

- Acne vulgaris
- Acute intermittent porphyria
- Pellagra
- Pseudoxanthoma elasticum
- Psoriasis

Exacerbation or localisation of other dermatoses is characteristic of:

- Pellagra
- Hartnup's disease
- Lupus erythematosus
- Darier's disease
- Rosacea
- Scleroderma
- Actinic lichen planus
- Lymphocytoma.
Porphyria cutanea tarda (PCT) is a term that encompasses a group of related disorders, all of which arise from deficient activity of the haeme-synthetic enzyme uroporphyrinogen decarboxylase (URO-D) in the liver.

The porphyrins produced in PCT are photoactive molecules that absorb light energy strongly in the visible violet spectrum. Photoexcited porphyrins in the skin mediate oxidative damage to biomolecular targets, causing cutaneous photosensitivity reactions.

The most common presenting sign of PCT is fragility of sun exposed skin after mechanical trauma, leading to erosions and bullae, worst on dorsal hands, forearms, and face.
A 22-year-old woman complains of haemoptysis, abdominal pains, and pyrexia for a month. She is admitted to hospital and found to be apyrexial and haemodynamically stable. There are numerous crusted, linear lesions on her forearms.

Which is the most likely diagnosis?

(Please select 1 option)

- Acute intermittent porphyria
- Factitious disorder
- Systemic lupus erythematosus
- TB
- Wegener's granulomatosis

This lady warrants further investigation, but the question asks you what the most likely diagnosis is. The history is very vague and on clinical examination she has no clinical features other than a rash. She is apyrexial on this occasion, and the fact she is haemodynamically stable rules out prolonged significant haematemesis. Linear lesions are rarely caused by organic disease, and should make you query dermatitis artifacta especially when the lesions are inaccessible locations such as the forearms.

Porphyria may be expected to have vesicles on sun exposed regions, such as the face, forearms, and legs. However, the history is too long for acute intermittent porphyria. Attacks typically present
with autonomic disturbance and sympathetic overactivity, and often with neurological signs, none of which are present here.

The history could fit with TB, if the patient has risk factors for exposure. Early morning sputum or urine could be examined to help exclude this diagnosis. A chest radiograph may be indicated.

Systemic lupus erythematosus can present in a variety of ways, and can occur in this age group. A more detailed history would be required, and testing ANA (anti-nuclear antibodies) may be helpful.

Wegener's granulomatosis typically has a more acute presentation than this, with evidence of hard clinical signs. Shortness of breath is usually evident if pulmonary haemorrhage has developed. Sinus symptoms are often also present.
A 75-year-old female presents with generalised erythema and pustule formation. She has a history of psoriasis and has recently been treated with oral prednisolone for asthma. Which of the following is the most appropriate next course of action?

(Please select 1 option)

- Admission to hospital - Correct
- Patch testing
- Psoralen with ultraviolet-A therapy (PUVA)
- Skin biopsy
- Treatment with erythromycin as an outpatient

This is erythroderma which is a dermatological emergency. The patient needs admission with close supervision and supportive treatment with IV fluids and antibiotics.
Work Smart

Question 7 of 63

Which of the following concerning pityriasis rosea is correct?

(Please select 1 option)

- It is characterised by flat scaly patches
- It is due to a fungal infection
- It is frequently associated with oro-genital itching
- May be preceded by intense itching
- Tends to recur after apparent cure

Pityriasis rosea is a rash that can occur at any age, but it occurs most commonly in people between the ages of 10 and 35 years.

It may be set off by a viral infection but does not appear to be contagious; herpes viruses 6 and 7 have most often been associated with pityriasis rosea. It is not caused by a fungus.

It is not related to foods, medicines, or stress. It most often affects teenagers or young adults.

The condition often begins as a large single pink patch on the chest or back. This patch may be scaly and is called a 'herald' or 'mother' patch.

Within a week or two, more pink patches, sometimes hundreds of them, appear on the body and on the arms and legs. Patches may also occur on the neck, and though rare, the face.

The oval patches follow the line of the ribs like a fir tree. They have a dry surface and may have an inner circlet of scaling.
Work Smart

Question 8 of 63

Which of the following concerning leg ulcers is correct?

(Please select 1 option)

- Diuretics have been shown to improve ulcer healing when associated with oedema
- In diabetic ulcers, the dressing should be left in situ for no more than one week - Correct
- Large gravitational ulcers are always painful
- Treating superficial infection with antibiotics has been shown to be beneficial
- Ulcers caused by arterial disease are typically treated by compression bandaging

Diuretics may reduce oedema but have not been demonstrated per se to reduce healing time.

Gravitational ulcers are not usually painful.

If there are no obvious features of surrounding cellulitis, antibiotic therapy is usually unnecessary and has not been shown to improve healing in superficial infection which is common in ulceration.

Next question
Go to summary
A 16-year-old boy presents with erythema nodosum.

Which of the following should be considered?

(Please select 1 option)

- Cytomegalovirus infection
- Kawasaki disease
- Reiter's disease
- Toxoplasmosis
- Ulcerative colitis  □ Correct

Erythema nodosum is characterised by painful, indurated, shiny, red, hot, elevated nodules 1-3 cm diameter particularly on the shins. There may be associated fever, malaise, and arthralgia ± hilar adenopathy.

Over a period of days they become violaceous, then dull purple, then fade like a large bruise without residual ulceration or scar. There may be crops over three to six weeks.

They are uncommon under the age of 6, and are commoner in females than males.

Causes include infections such as:

- *Streptococci*
- Leptospirosis
• cat-scratch disease
• psittacosis
• \textit{Yersinia}, and
• Viruses: EBV.

Other causes include systemic diseases such as:

• SLE
• vasculitis
• regional enteritis
• ulcerative colitis
• Behçet syndrome, and
• sarcoidosis

Other causes include TB, tularemia, histoplasmosis, and coccidioidomycosis, and drugs such as sulphonamides, and the oral contraceptive pill.

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Question 10 of 63

A 30-year-old woman presents with a skin rash. On applying pressure to an unaffected area of skin it was relatively easy to induce trauma.

Increased fragility of the skin is characteristic of which of the following conditions?

(Please select 1 option)

- Acute intermittent porphyria
- Epidermolysis bullosa  □ Correct
- Neurofibromatosis
- Pseudo-xanthoma elasticum
- Tuberous sclerosis

Increased skin fragility is seen in a number of disorders and is used as a clinical test in bullous disorders (Nikolsky's sign).

Other causes include:

- pemphigus vulgaris
- porphyria cutanea tarda
- drug reactions (especially pseudoporphyria).

Other causes of increased skin fragility (not associated with bullae) include long term corticosteroid therapy, Ehlers-Danlos syndrome and scurvy (vitamin C deficiency).
A 75-year-old female presents with chronic leg ulceration which is a consequence of venous insufficiency.

Which one of the following is the most appropriate management?

(Please select 1 option)

- Appropriate systemic antibiotic in preparation for skin grafting
- Compression bandaging  Correct
- Improve the venous return by limb elevation
- Skin biopsy to exclude neoplasm
- Vein surgery exclusion of neoplasm by skin biopsy

Venous ulcers are secondary to venous stasis and chronic stretching of the walls of the superficial veins. These eventually become thinner and ulcerate.

The mainstay of treatment of venous ulceration is compression therapy, which aims to improve venous return and thereby reduce venous hypertension.

The patient should always have their Doppler's and ABPI (ankle brachial pressure index) prior to compression. The ABPI should be greater than 1 before compression bandaging is used (this excludes significant arterial disease.)

Reference & Further Reading:
### Answer Statistics

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Times answered: 7551

### Test Analysis

- Correct: 69%
- Incorrect: 14%
- Partially Correct: 7%
- Correct: 3%

Score: 63.64%
Total Answered: 11

### Feedback
A 40-year-old female presents with a six month history of pruritic papules, vesicles, and excoriations on the elbows, knees, buttocks, and scalp.

Her GP has prescribed topical betamethasone therapy which has been unhelpful.

Which of the following is the most likely diagnosis?

(Please select 1 option)

- Atopic dermatitis (eczema)
- Dermatitis herpetiformis (DH)  □ Correct
- Henoch-Schönlein purpura (HSP)
- Psoriasis
- Scabies

The question describes the characteristic distribution of the lesions of dermatitis herpetiformis.

DH is one of the immunobullous conditions and characteristically has very intensely pruritic vesicles. It is not usually responsive to topical steroids, but would respond well to dapsone. It is associated with gluten sensitivity and coeliac disease.

Atopic eczema is non-vesicular and would respond to potent topical steroids.

HSP is a purpuric rash and is non-pruritic.

Scabies usually affect the extremities and rarely affect above the neck line. They do not cause
papules and vesicles.

**Answer Statistics**

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Times answered: 8138

**Test Analysis**

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Score: 66.67%

Total Answered: 12

**Feedback**
A 50-year-old man presented in the summer complaining of itching and blistering of his hands and forehead.

On examination there were small areas of excoriation on the backs of his hands.

Which is the most likely diagnosis?

(Please select 1 option)

- Dermatitis herpetiformis
- Lupus erythematosus
- Pemphigoid
- Pemphigus
- Porphyria cutanea tarda (PCT)  □ Correct

The distribution of the lesions suggests a photosensitive element.

Both lupus erythematosus and PCT are associated with a photosensitive element, however this is more typical of PCT.

PCT causes blistering of the hands and the forehead which usually heal with small scar and milia formation.

It is also associated with an excessive alcohol intake.
Work Smart

Question 14 of 63

A 38-year-old female presents with red target lesions confined to the hands and is diagnosed with erythema multiforme.

Which of the following could be the cause?

(Please select 1 option)

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<td>Cytomegalovirus infection</td>
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<td>Group B streptococci</td>
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<td>Langerhan's cells histiocytosis</td>
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<td>Penicillin V</td>
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<td>Ureaplasma urealyticum</td>
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Potential causes of erythema multiforme include:

Infections:

- viruses - herpes simplex 1 and 2, hepatitis B, Epstein-Barr virus (EBV), enteroviruses
- small agents - *Mycoplasma pneumoniae*
- bacteria - Group A Streptococcus, eosina, and
- other - *Mycobacterium tuberculosis*, histoplasma, coccidioides.

Neoplasia:

- leukaemia, and
• lymphoma.

Antibiotics:

• penicillins
• sulphonamides
• isoniazid, and
• tetracycline.

Anticonvulsants:

• phenytoin
• phenobarbitone, and
• carbamazepine.

Other caused include:

• aspirin
• radiation therapy
• etoposide
• NSAIDs
• sunlight, and
• pregnancy.

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Answer Statistics

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Times answered: 9224

Test Analysis

Correct | Incorrect | Partially Correct

Correct
Work Smart

Question 15 of 63

A 68-year-old woman presents with a two month history of a widespread pruritic rash.

Examination reveals widespread erythema with several small blisters containing straw-coloured fluid and one or two larger serosanguineous blisters.

Which of the following is the most likely diagnosis?

(Please select 1 option)

- Bullous impetigo
- Bullous pemphigoid [Correct]
- Insect bite
- Scabies
- Urticarial vasculitis

Pemphigoid, erythema multiforme, and herpes are the commonest causes of a blistering rash.

The history above is a classic description of bullous pemphigoid (BP).

Immunoglobulin (Ig)G autoantibodies bind to the skin basement membrane in patients with BP. The binding of antibodies at the basement membrane activates complement and inflammatory mediators.

Activation of the complement system is thought to play a critical role in attracting inflammatory cells to the basement membrane. These inflammatory cells are postulated to release proteases, which degrade hemidesmosomal proteins and lead to blister formation.
Eosinophils are characteristically present in blisters as demonstrated by histopathologic analysis, although their presence is not an absolute diagnostic criterion.
A 20-year-old male presents with extensive, coalescing, hypopigmented, slightly scaly lesions on his back and chest.

The rash had been present for two years and had gradually become more extensive. He had otherwise been in good health. The lesions were not symptomatic but he was concerned about their appearance.

Which is the most appropriate treatment for his condition?

(Please select 1 option)

- Aciclovir cream
- Ketoconazole cream - This is the correct answer
- Nystatin cream
- Oral itraconazole
- Oral terbinafine - Incorrect answer selected

The patient presents with an asymptomatic eruption on his trunk. The lesions are scaly, hypopigmented, and are not associated with any systemic disease. This is characteristic of pityriasis versicolor, which is caused by the unicellular yeast Pityrosporum ovale and Pityrosporum orbiculare. The yeast is lipophilic and is encouraged by an increase in environmental temperature, thus many patients notice that the condition begins after a summer vacation.

It is a disorder of the healthy, but the immunocompromised are at risk.
The condition is asymptomatic and appears pale in comparison to the normal skin. The fungus affects the melanocytes hence the hypo-pigmentation.

The treatment options include topical imidazole creams, selenium sulphide shampoo and, if not responding to topical treatment, oral itraconazole 200 mg once a day for seven days.

In this patient the topical treatment should be tried first.
A 65-year-old female who has a history of long-standing psoriasis and heavy alcohol intake, presents with a severe exacerbation of psoriasis. She was admitted and received topical therapy and over the month of her admission, her gamma-GT concentration had fallen from 400 U/L to 150 U/L (4-35).

Six weeks after discharge she was seen in outpatients where her psoriasis remained under control, but she complained of generalised hair loss.

Which is the most likely cause for her hair loss?

(Please select 1 option)

- Alopecia areata
- Iron deficiency
- Telogen effluvium
- Thiamine deficiency
- Trichotillomania

In a normal healthy person’s scalp, about 85% of the hair follicles are actively growing hair and 15% are resting.

If there is some shock to the system, as many as 70% of the scalp hairs can be precipitated into a resting state, thus reversing the usual ratio. Typical precipitants include illnesses, operations, accidents, and childbirth.

The resting scalp hairs, now in the form of club hairs, remain firmly attached to the hair follicles at
first. It is only about two months after the shock that the new hairs coming up through the scalp push out the 'dead' club hairs and increased hair fall is noticed. Thus, paradoxically, with this type of hair loss, hair fall is a sign of hair regrowth.

As the new hair first comes up through the scalp and pushes out the dead hair a fine fringe of new hair is often evident along the forehead hairline. At first, the fall of club hairs is profuse and a general thinning of the scalp hair may become evident but after several months a peak is reached and hair fall begins to lessen, gradually tapering back to normal over six to nine months.

As the hair fall tapers off, the scalp thickens back up to normal, but recovery may be incomplete in some cases.
A 70-year-old woman complained of a rash that had developed over a month. She had otherwise been fit and well.

On examination, there were numerous tense, fluid-filled blisters over the trunk and limbs, but no mucosal involvement was evident.

What is the most likely diagnosis?

(Please select 1 option)

- Dermatitis herpetiformis
- Erythema multiforme
- Herpes simplex
- Pemphigoid
- Pemphigus vulgaris

The patient presents with tense blisters on her arms, trunk and legs. She is otherwise well and there is no mucosal involvement. This is typical of bullous pemphigoid.

Dermatitis herpetiformis presents with itchy excoriated areas in the elbows knees and buttocks.

Erythema multiforme presents with characteristic target lesions.

Herpes simplex is vesicular and in generalised cases the patient is likely to be unwell.

Pemphigus presents with superficial erosions and usually there is mucosal involvement.
A 55-year-old woman presents with a non-pruritic rash that had developed over the last two months. Examination revealed several circular, erythematous, raised, smooth-surfaced lesions of variable size from 1-5 cm in diameter on the elbows, extensor aspects of the forearms and knuckles.

Which is the most likely diagnosis?

(Please select 1 option)

- Eczema
- Granuloma annulare - Correct
- Psoriasis
- Tinea corporis
- Urticaria

The history of non-itchy, circular, raised, smooth-surfaced lesions on the elbows, extensor aspects of the forearms and knuckles and the raised borders are suggestive of granuloma annulare.

Discoid eczema tends to be scaly and pruritic in nature.

Psoriasis typically has a silvery scale and can be pruritic.

Urticaria lasts a few hours and is pruritic.

Tinea corporis is a fungal infection and is typically scaly and pruritic in nature.

The most likely answer is therefore granuloma annulare. This can be associated with diabetes.
An 18-year-old woman attends antenatal clinic 12 weeks into her pregnancy; the doctor incidentally notes numerous small lumps over her trunk and freckles in her axillae.

She reported that none of her relatives had any similar features.

Which of the following is the most likely diagnosis?

(Please select 1 option)

- Acanthosis nigricans
- Dysplastic naevus syndrome
- Mastocytosis
- Neurofibromatosis
- Tuberous sclerosis

The patient is likely to have neurofibromatosis (NF1).

To be given the diagnosis of NF1, an individual must have at least two of the following features:

- six or more café-au-lait spots
- two or more neurofibromas or a plexiform neurofibroma
- axillary freckling (can also be present in the groins)
- optic glioma
- lisch nodules (visible within the iris), or
- a family history.
In 50% of cases there will be no family history as there is a high incidence of new mutations.

Acanthosis nigricans is velvety hyperpigmentation usually present within the axillae, and associated with obesity or endocrinologies.

Dysplastic naevus syndrome is a familial cutaneous condition which is characterised by atypical naevi and melanomas.

Mastocytosis describes the proliferation and accumulation of mast cells within the organs. In the skin, it can present with urticaria, maculopapular lesions, and diffuse infiltration.

Tuberous sclerosis is characterised by the formation of hamartomas in a number of different organs, including the brain, skin, and kidney.
A 35-year-old woman presents with a facial rash which had been present for one year. On examination she had erythematous, scaly, indurated plaques on both cheeks with areas of scarring alopecia. Hyperkeratosis over dilated hair follicles was also seen.

Which of the following is the diagnosis?

(Please select 1 option)

- **Acne rosacea**
- **Discoid lupus erythematosus**  **Correct**
- Impetigo
- Lupus pernio
- Psoriasis

The patient has discoid lupus as suggested by the indurated plaques on cheeks, the scarring alopecia and hyperkeratosis over the hair follicles.
Work Smart

Question 22 of 63

Which of the following statements regarding psoriasis is correct?

(Please select 1 option)

- 1% of patients have associated psoriatic arthropathy
- Guttate psoriasis is the most common form of the disease
- Psoriasis is more common at lower geographical altitudes
- Psoriatic arthropathy precedes cutaneous lesions in roughly 20% of cases
- The prevalence in the United Kingdom is 10%

Correct

The prevalence of psoriasis is reported as between 0.5 and 4.6%.

For reasons which may be explained by the filtering of ultraviolet B (UVB) light, psoriasis is more common at higher altitudes.

The commonest form of psoriasis is plaque psoriasis, making up approximately 80% of cases (guttate - 10%, erythrodermic - 3%, pustular - 3%).

Studies report:

- a 5-42% prevalence of psoriatic arthropathy in patients with cutaneous psoriasis
- arthropathy precedes cutaneous lesions in 20%
- cutaneous lesions precede joint disease in 60-70%, and
- they occur simultaneously in 10-20%.
### Work Smart

**Question 23 of 63**

Which of the following statements regarding psoriasis is most true?

(Please select 1 option)

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<td>Guttate psoriasis often arises after staphylococcal infection</td>
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<td>T cells play a prominent role in the pathogenesis of psoriasis</td>
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Diagnosis of psoriasis is based on clinical observation of sharply demarcated, erythematous, scaling plaques, and rarely requires biopsy.

Streptococcal infection is associated with precipitation and recurrence of guttate psoriasis.

Ciclosporin is a major inhibitor of T cell activation and, given that T cells are central to the pathogenesis of psoriasis, is very effective treatment in psoriasis.

Genetic studies have led most experts to believe that psoriasis is the result of multiple genetic factors interacting with environmental stimuli. Genetic factors also seem to contribute to the clinical manifestations of the disease, for example, age of onset and severity of disease.
Psoralen and ultraviolet light (PUVA) is an effective treatment for psoriasis, but has been related to increased risk of squamous cell carcinoma and possibly malignant melanoma.

Retinoids are most effective in combination therapy especially with ultraviolet B (UVB) phototherapy and PUVA.

Part of the attraction of vitamin D analogues over steroids is that they do not cause cutaneous atrophy, whereas steroids do.

The recombinant tumour necrosis factor and receptor fusion protein, etanercept, has demonstrated considerable beneficial effects on psoriatic arthropathy in placebo controlled, double blind studies.

Infliximab is associated with tuberculosis by reactivation of latent disease. Thus it is advised that patients who are to be treated with infliximab are tuberculin tested and if required receive chest radiography.
Work Smart

Question 25 of 63

A 41-year-old female presents with a six month history of a pruritic vesicular-papular rash on the elbows, knees, and buttocks associated with numerous blistering eruptions and excoriations.

Her GP has prescribed topical steroid therapy but this has not helped.

Which is the most likely diagnosis?

(Please select 1 option)

- Atopic eczema (dermatitis)
- Dermatitis herpetiformis (DH) □ Correct
- Lichen planus
- Psoriasis
- Scabies

This patient presents with pruritic vesicles on her elbows, knees, and buttocks which have not responded to topical steroids. This is the classical presentation of DH.

Atopic dermatitis usually is flexural and responds to topical steroids.

Henoch-Schönlein purpura is a form of vasculitis.

In scabies there are burrows and in psoriasis the rash consists of plaques with silvery scales.
Work Smart

Question 26 of 63

A 36-year-old female presents with raised erythematous tender lesions on both legs which have developed since she had a throat infection two weeks ago.

Which one of the following investigations is most likely to establish the diagnosis?

(Please select 1 option)

- [ ] Anti-streptolysin-O titre (ASOT)  
  This is the correct answer
- [ ] Chest x ray  
  Incorrect answer selected
- [ ] Mantoux test
- [ ] Throat swab cultured for bacteria
- [ ] Throat swab cultured for viruses

This lady presents with tender lesions two weeks after a sore throat.

This is most likely to be post-streptococcal erythema nodosum and ASOT is most likely to confirm this.

Next question  
Go to summary

Answer Statistics
Work Smart

Question 27 of 63

A 17-year-old girl presents with a two week history of urticaria. Over the last couple of days she has been aware of new lesions occurring on a daily basis, with the old lesions disappearing within 24 hours.

Which one of the following statements is most likely to be correct?

(Please select 1 option)

- She is likely to have an associated asthma
- She is likely to have taken penicillin recently
- She is unlikely to have any identifiable trigger factor
- The lesions will be present for at least 24 hours
- There is likely to be a nut allergy

Urticaria can be classified into idiopathic, immune, or non-immune. Up to 50% of cases are idiopathic, as is likely in this case where the episodes do not seem to be associated with exposure to a particular substance.

Peanut allergy and penicillin may cause urticarial rashes but there is usually an associated specific history of contact with the allergen.

Urticarial lesions usually last less than 24 hours, but it is possible that multiple crops may appear.
A 70-year-old female presents with a four month history of a dry, pruritic rash affecting the upper back and shins.

Which of the following is the most appropriate initial management of this patient?

(Please select 1 option)

- Avoidance of contact irritants
- Emollients
- Patch testing to ascertain contact allergen
- Skin biopsy
- Topical corticosteroids

This lady is likely to have asteatotic eczema which is a common problem and will improve just with plain emollients.

Xerotic skin is commoner in the elderly population especially in the winter months due to the dry heat from central heating.

All the other suggestions may be appropriate in a patient resistant to first line treatment but the first line is to try emollients.
A 16-year-old girl is seen in clinic as she is concerned due to areas of hair loss on the scalp. Past medical history includes atopic eczema and she has a number of depigmented areas on her hands.

Which is the most likely diagnosis?

(Please select 1 option)

- **Alopecia areata**
- Hypothyroidism
- Seborrhoeic dermatitis
- Systemic lupus erythematosus
- Trichotillomania

This girl has a combination of vitiligo and alopecia areata which can co-exist and have similar autoimmune aetiology.

Discrete areas of hair loss and normal texture on the scalp are highly suggestive of alopecia areata.
A 52-year-old female presents with blistering of the hands and arms which deteriorates during the summer. She is otherwise well and drinks approximately 20 units of alcohol weekly.

Examination of her skin revealed erosions and scarring on the backs of her hands and forearms, and some mild hirsutism.

Which one of the following is the most likely diagnosis?

(Please select 1 option)

- Acute intermittent porphyria
- Erythropoietic protoporphyria
- Pemphigoid
- Porphyria cutanea tarda (PCT) **Correct**
- Subacute lupus erythematosus (LE)

The history of photosensitive eruption, hypertrichosis, and milia formation (keratin-containing cysts) are characteristic of PCT.

Acute intermittent porphyria usually causes intermittent neurological and abdominal problems.

Subacute LE can cause erythema and scarring, but in a patient with increased alcohol intake and hypertrichosis the most likely diagnosis is PCT.

Erythropoietic protoporphyria patients get pain and erythema on exposure to sunlight.
A 22-year-old female returns from a fortnight holiday in Cyprus with a tan and numerous scaly hypopigmented lesions on the neck and upper trunk.

Which of the following is the most likely diagnosis?

(Please select 1 option)

- Chronic plaque psoriasis
- Discoid eczema
- Pityriasis rosea
- Pityriasis versicolor ✅ Correct
- Seborrhoeic dermatitis

**Pityriasis versicolor** is caused by a superficial fungal infection with *Pityrosporum ovale*.

It usually presents as slightly scaly hypopigmented lesions. Growth is encouraged by an increase in temperature and suntan oils, and is most commonly seen after a sun holiday.

Chronic plaque psoriasis, discoid eczema and seborrhoeic dermatitis have distinct appearance and distribution.

Pityriasis rosea usually starts with a herald patch followed by small scaly lesions following the rib lines.
A 17-year-old pregnant female attends antenatal clinic and is noted to have scattered, small, raised lesions on her trunk and axillary freckles.

She was not aware of any of her family members having these lesions.

Which of the following is the likely mode of inheritance of this condition?

(Please select 1 option)

- [ ] Autosomal dominant □ Correct
- [ ] Autosomal recessive
- [ ] Trinucleotide repeating
- [ ] X-linked dominant
- [ ] X-linked recessive

This patient has neurofibromatosis with axillary freckling and neurofibromas.

This is usually inherited as autosomal dominant although it may arise from a sporadic new mutation of the NF1 gene.
Work Smart

Question 33 of 63

A 72-year-old female presents with a longstanding leg ulcer.

Which of the following minerals is most important in wound healing?

(Please select 1 option)

- Copper
- Magnesium
- Potassium
- Selenium
- Zinc  Correct

Certain supplements are important in wound healing particularly zinc, vitamin C, and arginine.

Zinc is a component of many of the enzymes responsible for wound healing.

Answer Statistics

1 3%
2 5%
3% 5%
Work Smart

Question 34 of 63

A 20-year-old female with a history of systemic lupus erythematosus presents with symmetrical reticulated, violaceous patches, which become more prominent in cold weather involving both lower limbs.

Which of the following is the likely diagnosis?

(Please select 1 option)

- Erythema ab igne
- Erythema marginatum
- Erythema nodosum
- Livedo reticularis  □ Correct
- Pyoderma gangrenosum

Livedo reticularis is due to dilation of capillary blood vessels and stagnation of blood within these vessels producing a mottled discolouration of the skin.

It is described as being reticular (net-like) cyanotic cutaneous discolouration surrounding pale central areas. It occurs mostly on the legs, arms, and trunk and is more pronounced in cold weather.

Mostly it is idiopathic, or secondary to:

- malignancy
- vasculitis
- SLE,
- cholesterol embolisation.

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<td>12%</td>
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Score: 64.71%
Total Answered: 34
A 40-year-old female presents with a long history of excessive localised armpit sweating. She finds the problem embarrassing and has problems staining clothes. She has tried antiperspirants without relief.

Which is the most appropriate treatment that you would offer this patient?

(Please select 1 option)

- Amitriptyline
- Axillary surgery
- Botulinum toxin injection  □  Correct
- Propantheline
- Topical aluminium salts

This woman has primary hyperhidrosis which can be quite psychologically disabling.

In this case the most appropriate treatment would be botulinum toxin injection to each axilla. This treatment is licensed for use and would be the preferred treatment before aluminium salts, as antiperspirants have failed.

Similarly, antimuscarinics are associated with systemic side effects that may prove intolerable and their efficacy is really not proven.

Pharmacological approaches should be tried before surgery.
A 25-year-old female presents with concerns regarding the unsightly appearance of her toe nails. They have a whitish discolouration extending up the nail bed in a number of the toes of both feet. They are entirely painless and she is otherwise well.

Which of the following is the most appropriate treatment?

(Please select 1 option)

- Oral fluconazole
- **Oral terbinafine** (Correct)
- Topical benzoic acid
- Topical fluconazole
- Topical terbinafine

This young woman has typical features of fungal nail infection (onychomycosis) and the most appropriate treatment is oral antifungals; topical antifungals may be effective for one or two nails but not where there are a number affected. Toe nail growth is slow and the response to therapy is also slow. Treatment may be required for 6 months or more.

Terbinafine is recommended first line because it is effective against both dermatophytes and Candida species, whereas the '-azoles' (e.g. fluconazole) do not have as much efficacy against dermatophytes.

Further Reading:

**Answer Statistics**

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Times answered: 8535

**Test Analysis**

Correct Incorrect Partially
Correct

Score: 66.67%
Total Answered: 36
Question 37 of 63

A 22-year-old man consults his GP complaining of redness and itching on his face and hands. He has regularly visited another GP for similar complaints within the last two years and has been signed off on sick leave from employment as a builder. He is in receipt of benefits and reports that he is in the process of making an insurance claim for loss of earnings. He says that there was one ointment that cured the problem but he had not been able to find any proprietary medication that works.

Examination showed no skin lesions and no apparent rash. He does not seem worried. He asks his GP to sign his insurance claim paperwork.

Which is the most likely diagnosis?

(Please select 1 option)

- Conversion disorder
- Delusional disorder
- Malingering  Correct
- Munchausen syndrome
- Obsessive compulsive disorder

In somatoform disorders, both illness production and motivation are unconscious drives.

In malingering, as suggested here, the patient consciously fakes or claims to have a disorder in order to attain a specific gain (for example, financial).
Munchausen's syndrome is manifested by a chronic history of multiple hospital admissions and willingness to receive invasive procedures.
Work Smart

Question 38 of 63

A 33-year-old female attends her GP with concerns regarding a mole.

Which of the following characteristics of the lesion would raise suspicion that it is a malignant melanoma?

(Please select 1 option)

- Lesion has irregular edge  □ Correct
- Lesion is 5 mm in diameter
- Lesion is pigmented uniformly
- Lesion is present on face
- Lesion is smoothly raised

The mnemonic of ABCDE regarding characteristics of a melanoma are as follows:

- A - Asymmetry - one half of the lesion does not match the other half
- B - Border irregularity
- C - Colour variegation - pigmentation is not uniform
- D - Diameter- a diameter 7 mm warrants investigation although changes in size are also important
- E - Evolution - evolving size or changes in characteristics such as nodules.
A 59-year-old patient of South Asian origin presents with a widespread blistering rash.

Which of the following features would be consistent with a diagnosis of pemphigus?

(Please select 1 option)

- Acanthosis
- Blisters arising within the subepidermal area
- IgA antibodies
- Oral involvement  □ Correct
- Treatment with methotrexate

Pemphigus is associated with loss of intercellular cohesion in the lower part of the epidermis, leading to acantholysis (separation of keratinocytes). Pemphigus is classically associated with flaccid blistering, and often with immunoglobulin (Ig)G antibodies.

Treatment may be successful with azathioprine.

Pemphigoid is associated with subepidermal bullae.
# Work Smart

**Question 40 of 63**

During a follow up visit at an asthma clinic, a 38-year-old female complains of the appearance of a mole.

Which of the following characteristics of the lesion would raise suspicion that it is a malignant melanoma?

(Please select 1 option)

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<td>✔</td>
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<td>Lesion is raised</td>
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<td>Lesion is 6 mm in diameter</td>
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The mnemonic of ABCDE regarding characteristics of a melanoma are as follows:

- **A** - Asymmetry - one half of the lesion does not match the other half
- **B** - Border irregularity
- **C** - Colour variegation - pigmentation is not uniform
- **D** - Diameter- a diameter 7 mm warrants investigation although changes in size are also important
- **E** - Evolution - evolving size or changes in characteristics such as nodules.

Further Reading:
### Answer Statistics

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Times answered: 7955

### Test Analysis

- Correct: 86%
- Incorrect: 4%
- Partially Correct: 6%
- Partially Incorrect: 1%
- Partially Partially Correct: 2%

Score: 70%
Total Answered: 40

### Feedback
A 43-year-old female presents with a weepy, erythematous rash mainly affecting the forehead, scalp, neck, and upper back.

Three days earlier she had used red hair dye at home to self-administer 'highlights'.

Which is the likely diagnosis?

(Please select 1 option)

- Acne rosacea
- Contact allergic dermatitis  □ Correct
- Lupus erythematosus
- Psoriasis
- Seborrhoeic dermatitis

Hair dye contains substances which may induce an eczematous response in form of contact allergic dermatitis.

This type of reaction is typical for this sort of time scale, and is an example of a type IV, or delayed, hypersensitivity reaction.

Sensitisation occurs on initial exposure to the allergen and 'memory' T-cells proliferate in lymphoid tissue. Subsequent exposure to allergen induces activation of the T-lymphocytes and an inflammatory response.

Hairdressing chemicals are a very common cause of contact allergic dermatitis, a disorder which is
very common amongst the hairdressing community.

A lady at this age is unlikely to present with a new, previously undiagnosed case of eczema.

Acne rosacea is usually a disorder of the skin on the cheeks and nose.

Acute cutaneous lupus erythematosus presents with an erythematous rash over the face and neck. However there are no eczematous features.

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**Answer Statistics**

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Times answered: 8703

**Test Analysis**

Correct Incorrect Partially Correct

Score: 70.73%
Total Answered: 41
Work Smart

Question 42 of 63

Which layer of the epidermis determines the primary mechanical properties of skin?

(Please select 1 option)

- Dermis
- Stratum basale
- Stratum corneum
- Stratum granulosum
- Subcutaneous tissue

The stratum corneum ("horny layer") is the outermost layer and provides a mechanical barrier to the skin therefore determines the mechanical functions of the skin. The hands and feet have thick stratum corneum as compared to the lips and eyelids. The thicker the stratum corneum is the more protection there is for the skin.

The dermis also has some factor to play with its elastic fibres and fibrous tissue.

The rest of the layers are also important but the mechanical properties are primarily determined by the stratum corneum.

The stratum basale is the innermost layer and generates keratinocytes which migrate through the stratum spinosum to the stratum granulosum, where they are involved in keratin binding, before transforming into corneocytes that make up the stratum corneum.
Concerning neurofibromatosis type 1 (NF1), which one of the following statements is true?

(Please select 1 option)

- Bilateral acoustic neuromas are common
- Clinical severity in individuals is similar in a given family
- New mutations occur rarely
- Pigmented spots on the iris are a characteristic feature **Correct**
- The diagnosis is likely if two café-au-lait patches are present

Lisch nodules of the iris are present in more than 90% of patients.

Bilateral acoustic neuromas are a hallmark feature of neurofibromatosis type 2.

Expressivity of the gene is highly variable and members of the same family usually show wide differences in clinical symptoms.

NF1 is one of the most common autosomal dominant conditions. However almost half of all cases give no family history and are new mutations. The mutation rate is estimated to be 1:10,000 gametes.

The diagnosis is suggested by six or more café-au-lait macules (spots), each over 5 mm in diameter in prepubescent individuals and over 15 mm in postpubertal individuals.
A 51-year-old male presents with a rash that has been present intermittently over the last two years.

On examination there is a symmetrical rash over the cheeks, nose, and chin with multiple papules and pustules.

Which is the most appropriate therapy for this patient?

(Please select 1 option)

- Flucloxacillin
- Hydroxychloroquine
- Isotretinoin
- Oxytetracycline
- Prednisolone

The description is that of acne rosacea particularly in view of the distribution, duration, and absence of any other features.

The most appropriate treatment is a tetracycline.
A nurse presents with severe swelling around the mouth following her lunch. She was treated for suspected anaphylaxis and on further questioning she says that previously she has had an itchy rash on her hands after wearing latex gloves.

Which of the following foods is the most likely to have been in her lunch to explain this reaction?

(Please select 1 option)

- Asparagus
- Banana - Correct
- Gooseberry
- Blackcurrant
- Star fruit

Latex is one of the allergens which has been shown to have an association with hypersensitivity to some plant antigens - the oral allergy syndrome. This refers to an allergic reaction in response to eating certain foods thought to contain proteins which cross-react with antigens seen in latex. The reaction is classically limited to the mouth, tongue and throat.

The list of possible agents causing this hypersensitivity is extensive, and includes banana, avocado, potato, tomato, kiwi, chestnut, passion fruit, mango, pineapple, apple, peach, watermelon, and many more.

Reference:
A 15-year-old boy comes to the dermatology clinic as his parents are concerned about some changes they have noticed in his skin. He is from a travelling community, and as such his parents have previously shunned medical services.

On examination you notice that he has a number of facial and periungual fibromata. He also has a number of hypomelanotic areas (at least four) on examination of his skin. You also notice gingival fibromata and pitting of his tooth enamel on examination of his mouth.

On which chromosome is the abnormality associated with this disease likely to be found?

(Please select 1 option)

- Chromosome 2
- Chromosome 6
- Chromosome 9
- Chromosome 11
- Chromosome 12

This boy has tuberous sclerosis, which is inherited in autosomal dominant fashion, with responsible defects having been identified on both chromosome 9 and chromosome 16. These chromosomes carry codes for hamartin and tuberin, protein gene products which are responsible for regulation of cell growth.

Most of the tumours which are produced in tuberous sclerosis are hamartomas, and various
phenotypes of the disease occur, with some parents of patients having much more subtle features than those seen in their children.
Work Smart

Question 47 of 63

A 38-year-old woman has erythematous plaques with hyperpigmentation at the edge and central hypopigmentation. Serological tests are unremarkable and the patient is diagnosed with discoid lupus.

Which of the following therapeutic strategies is most appropriate initially?

(Please select 1 option)

- Cyclophosphamide
- Dapsone
- Methotrexate
- Oral prednisolone
- Sun protective measures ✅ Correct

Discoid lupus is photosensitive and so avoiding the sun with protective clothing and sunscreens, and changing behaviour is important.

Topical or intradermal steroids and hydroxychloroquine are useful therapies to prevent scarring and new lesions appearing. The latter are less effective if patients continue to smoke.

If these treatments are ineffective, second line drugs such as methotrexate, azathioprine, or thalidomide may be used.
Question 48 of 63

A 31-year-old woman comes to the dermatology clinic complaining that a mole on her forearm has changed shape, enlarging to nearly three quarters of a centimetre in diameter, and although it was previously homogeneous in colour, parts of it have now become a very dark black.

She has no significant past medical history but admits to significant use of tanning beds and having spent a few years living in California.

Investigations show:

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<td>White cell count</td>
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<td>Platelets</td>
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<td>ESR</td>
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Excision biopsy: 5 mm thick lesion, no ulceration.

Which of the following features is most associated with a poor prognosis in this patient?

(Please select 1 option)

- Depth of the melanoma lesion
- Female sex

Correct
Survival is strongly correlated with depth of melanoma at the point of diagnosis, with lesions over 4 mm thick being associated with a particularly poor outcome.

Other predictors of a poor outcome include increasing age and male sex.

Ulceration of the lesion also implies greater risk of metastases. For lesions over 4 mm thick with ulceration, five year survival is less than 50%.
A 45-year-old man is referred to the dermatology clinic, with an intensely itchy, red, scaling rash which affects his scalp predominantly and is worse in spring and winter time. He also has a patch on his chest and around his beard.

On examination he has a severe scalp rash with crusting and scaling of skin.

Investigations show:

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<td>Scalp biopsy</td>
<td>Hyperkeratosis, acanthosis and focal spongiosis</td>
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He tells you he cares most about his scalp.

Which of the following is the most appropriate first line treatment for him?

(Please select 1 option)

- Coal tar shampoo
- Ketoconazole shampoo

Correct
This man has seborrhoeic dermatitis which tends to affect hair bearing areas of skin with the scalp the worst affected.

It is thought that, at least in part, the activity of activated T cells may be enhanced by an increased reservoir of *Malassezia* yeasts. As such, regular washing of the hair with a ketoconazole based shampoo has been shown to reduce the severity of the condition.

Topical corticosteroids have been shown to hasten recovery, but may be associated with a rebound effect and rapid recurrence of the rash when they are withdrawn.

Coal tar shampoo and topical tacrolimus are alternate treatments.

Asteatotic dermatitis typically presents in the elderly with pruritic, xerotic, scaly skin typically over the shins but may occur over the back and hands. Tar based preparations are never used as they would aggravate the condition.
Work Smart

Question 50 of 63

A 17-year-old man comes to the clinic. He has recently returned from a holiday to Spain with his friends and is very disappointed with the quality of his tan, as there appear to be large depigmented areas on the skin of his abdomen and on his back. He says the areas are itchy.

On examination you confirm the depigmentation, and there is superficial scaling over the areas.

Which of the following is the most appropriate treatment?

(Please select 1 option)

- Oral antifungals
- Oral corticosteroids
- Reassurance
- Topical antifungals
- Topical corticosteroids

This patient has clinical findings which are typical of those seen in pityriasis versicolor, caused by a fungus known as *Malassezia furfur*. This causes more of a problem in hot weather, is present on the skin of the trunk, and leads to the depigmentation seen here.

Topical antifungals are the treatment of choice; if the depigmentation is extensive, a systemic compound like fluconazole may be used.
A young male athlete presented with multiple itchy scaly lesions over his legs and thighs. Historically he had had similar lesions in the past which had been treated with unspecified local medications. On examination he was found to have multiple erythematous scaly plaques with a raised peripheral margin, a clear centre with hyper-pigmentation.

What is the most likely diagnosis?

(Please select 1 option)

- Allergic contact dermatitis ☑️ Incorrect answer selected
- Fixed drug eruption
- Psoriasis
- Sarcoidosis
- Tinea corporis ☑️ This is the correct answer

Dermatophytosis is common in athletes. It usually presents with annular scaly plaques with active peripheral margins and central clearing resulting in increasing size of the lesions. The lesions are typically itchy and increase in number over a period of time. The affliction on legs and thighs is termed tinea corporis. It is occupational dermatoses in athletes and may be recurrent in them if due precautions are not taken.

Allergic contact dermatitis will present with itchy papulo-vesicular eruption at the site of contact of the allergen.
Fixed drug eruption presents with erythematous or hyperpigmented macules or patches, sometimes with central bullae. History of drug intake may be forthcoming and a history of recurrent such episodes at the same site may be present.

Psoriasis presents with papulosquamous lesions with micaceous scaling. Annular lesions may be present. Itching is not a feature.

Sarcoidosis may present with scaly plaques, however features of peripheral activity and central clearing are usually not seen and itching is not a feature.

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Times answered: 5824

Test Analysis

Correct Incorrect Partially
Correct

Score: 66.67%
Work Smart

Question 52 of 63

A 48-year-old father and his 20-year-old son presented with multiple itchy red lesions over their trunks and groins.

The son had initially developed the rash after working out in the local gym. Following this his father noticed a similar rash afflicting him.

Which is the most likely diagnosis?

(Please select 1 option)

- Allergic contact dermatitis
- Fixed drug eruption
- Psoriasis
- Sarcoidosis
- Tinea corporis  □ Correct

Dermatophytosis is common in young adults. It usually presents with annular scaly plaques with active peripheral margins and central clearing resulting in increasing size of the lesions. The lesions are typically itchy and increase in number over a period of time. The affliction of legs and thighs is termed tinea corporis. It is an occupational dermatoses in athletes and may be recurrent in them if due precautions are not taken. The condition is contagious and can typically spread in immediate contacts, such as family members, if treatment is delayed or precautions are not taken.

Allergic contact dermatitis will present with itchy papulovesicular eruption at the site of contact of the
Fixed drug eruption presents with erythematous or hyperpigmented macules or patches, sometimes with central bullae. History of drug intake may be forthcoming and a history of other recurrent episodes at the same site may be present.

Psoriasis presents with papulosquamous lesions with micaceous scaling. Annular lesions may be present. Itching is not a feature.

Sarcoidosis may present with scaly plaques, however, features of peripheral activity and central clearing are usually not seen and itching is not a feature.
A 5-year-old boy was brought in with crops of asymptomatic rash over the trunk of two months' duration.

Examination revealed skin coloured to pearly white and hemispherical to umbilicated papular lesions. Each one is approximately 4 mm in diameter and there are approximately 20 of these lesions present.

Which of the following is the most likely diagnosis?

(Please select 1 option)

- Cutaneous cryptococcosis
- Folliculitis
- Herpes simplex
- Molluscum contagiosum ✅ Correct
- Warts

The diagnosis of molluscum contagiosum is obvious when a child presents with pearly white hemispherical lesions particularly if they are umbilicated over limbs, trunk or face in various stages of evolution.

HIV positive patients may present with cryptococcosis. Cryptococcus neoformans infection affects 5-10% of patients with AIDS in the UK and USA and 30-40% in Africa. Up to 20% of patients with disseminated disease may have skin involvement.

In HIV/AIDS cryptococcal skin involvement should be suspected when papulonodular necrotising skin
lesions with central umbilication, like molluscum contagiosum are encountered in such patients along with pulmonary or neurological disease. Hence cutaneous cryptococcosis must be kept as a differential in a case of umbilicated lesions on the skin.

Folliculitis presents with painful papulopustular follicular lesions.

Herpes simplex infection presents with recurrent grouped vesicular eruptions on an erythematous base at mucocutaneous junctions.

Warts present with verrucous plaques and papules more commonly over extremities.
A 25-year-old lady with SLE (ANA positive, 1:1280), had a healthy term baby boy. At the time of birth he was noted to have macular erythematous rash on his face, and trunk. He is otherwise well.

Which of the following is the most likely cause of his rash?

(Please select 1 option)

- Discoid lupus erythematosus
- Erythema toxicum
- Neonatal lupus
- **Staphylococcus aureus**
- Systemic lupus erythematosus

This child has neonatal lupus.

Neonatal lupus is an uncommon condition associated with the transplacental passage of maternal anti-Ro and/or anti-La autoantibodies.

Findings may include:

- cutaneous lupus lesions
- third-degree heart block
- cardiomyopathy
hepatobiliary disease, and
cytopenias.

Typically, only one organ is affected in each infant.

The most severe manifestation is the heart block, which usually begins during the second trimester of pregnancy. It is rare, occurring in only 2% of mothers with anti-Ro or anti-La antibodies. Once established, this is permanent, unlike the other manifestations which are generally transient.

The rash is most frequently seen around the eyes, but also occurs in other parts of the body. Lupus presents as erythematous macular rash, on face or trunk, which may be photosensitive. Asymptomatic elevation of liver function tests is seen in 10-25% of cases. Overall, non-cardiac involvement is more common than cardiac.

A significant number of babies with neonatal lupus are born to mothers who are not known to have systemic lupus erythematosus.

Systemic lupus erythematosus does not occur in neonates.

Discoid lupus erythematosus presents with ulcers which heal with scarring.

The rash in erythema toxicum is papular, small, yellow-to-white coloured, and surrounded by red skin. This rash changes rapidly, appearing and disappearing in different areas over hours to days.

*Staphylococcus aureus* can cause impetigo and scalded skin syndrome, but these are not commonly seen in the immediate neonatal period.

Reference:

Question 55 of 63

A 35-year-old man presents to the dermatology clinic with a strange rash which affects the dorsum of his hands and feet and the extensor surface of his arms. He has no past medical history of note.

On examination his BP is 122/72 mmHg, pulse is 70 and regular. He has a number of lesions, formed by rings of papules, about 1-5 cm in diameter. The centres of these lesions look depressed, with slightly increased pigmentation, but the overlying skin is normal.

Investigations show:

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<th>Test</th>
<th>Result</th>
<th>Normal Range</th>
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<td>Haemoglobin</td>
<td>133 g/L</td>
<td>(135-177)</td>
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<tr>
<td>White cell count</td>
<td>5.6 ×10⁹/L</td>
<td>(4-11)</td>
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<tr>
<td>Platelets</td>
<td>199 ×10⁹/L</td>
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<td>Sodium</td>
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<td>(135-146)</td>
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<td>Potassium</td>
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<tr>
<td>Creatinine</td>
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<td>(79-118)</td>
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<tr>
<td>ESR</td>
<td>12 mm/hr</td>
<td>(&lt;10)</td>
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Which of the following is the most likely diagnosis?

(Please select 1 option)

- Erythema multiforme
- Erythema nodosum
These lesions are typical of granuloma annulare, a benign inflammatory condition which leads to the formation of dermal papules, and where lesions become larger, annular plaques. The aetiology of the condition is unknown, and multiple lesions occur in the age range 30-60 years.

Generalised disease is somewhat difficult to manage, although small trials of oral steroids, dapsone, ciclosporin, and anti-TNF antibodies have taken place.

The clinical scenario described is not typical of any of the other options given:

- erythema multiforme is described usually as multiple target lesions
- erythema nodosum as raised red papules on the shins
- lichen planus often associated with changes within the buccal mucosa, and
- psoriasis associated with scaling lesions.

Answer Statistics

Times answered: 5679

Test Analysis

Correct Incorrect Partially
Correct
A 35-year-old man has just been diagnosed with dermatitis herpetiformis. Besides starting on a gluten-free diet, his dermatologist has decided to start him on oral dapsone. Which laboratory test needs to be within the normal range before commencing therapy?

(Please select 1 option)

- Fasting glucose
- Fasting lipids
- Glucose-6-phosphate dehydrogenase (G6PD) levels  [This is the correct answer]
- Haemoglobin-A1C levels (HbA1C)
- Thiopurine methyltransferase (TPMT) levels  [Incorrect answer selected]

G6PD deficiency is an absolute contraindication to treatment with dapsone as it can lead to severe haemolytic anaemia. This is probably due to the N-hydroxy metabolites of dapsone, which are direct haemolytic agents. When allowed to build up to large enough amounts, they induce premature sequestration of the red cell in the spleen.

Abnormal HbA1C, fasting lipids and fasting glucose levels are not considered contraindications to treatment with dapsone.

TPMT levels are used to decide on starting doses of azathioprine.
A 25-year-old woman has just been diagnosed with chronic cutaneous lupus erythematosus. She has no other clinical or laboratory evidence to suggest systemic involvement. Apart from advice on sun avoidance, her dermatologist has decided to start her on oral hydroxychloroquine.

While on treatment with hydroxychloroquine, she requires pre-treatment evaluation and regular monitoring by which of the following specialists?

(Please select 1 option)

- [ ] Cardiologist
- [ ] Gastroenterologist
- [ ] Haematologist
- [ ] Neurologist
- [x] Ophthalmologist

Eye toxicity is one of the most serious side effects of treatment with antimalarials and requires regular screening. The cornea and macula may be affected by antimalarial medications.

Regular monitoring by specialists other than an ophthalmologist is not warranted for patients on treatment with antimalarials, although their services may be required in the event of the uncommon occurrence of systemic involvement of lupus in this patient.
A 12-year-old girl has severe atopic dermatitis which has not been well controlled with topical treatments, despite good compliance. Her dermatologist has decided to start her on treatment with oral ciclosporin.

Which of the following parameters needs to be regularly monitored while she is on treatment with ciclosporin?

(Please select 1 option)

- Blood glucose levels
- Blood pressure
- Bone age
- Height
- Pubertal staging

Hypertension is commonly associated with ciclosporin treatment. This is thought to be associated with systemic and renal vasoconstriction, and disturbed circadian regulation. Vasodilators such as prostacyclin and nitric oxide are suppressed, whereas vasoconstrictors including endothelin are increased. Glomerular filtration is reduced, and sodium retention increased.

Target organ damage has been shown to occur more rapidly due to these changes, including intracranial haemorrhages, left ventricular hypertrophy, and microangiopathic haemolysis. In order to avoid such target organ damage, blood pressure must be closely monitored so that treatment can be rapidly initiated. Effective therapy requires the use of vasodilating agents.
Whilst ciclosporin can mildly impair glucose tolerance, this is much less common than the hypertension seen with treatment.

Bone age, height and pubertal staging are not commonly affected by ciclosporin therapy.

Reference:

A 16-year-old boy has severe inflammatory acne that has not responded to treatment with oral antibiotics. His dermatologist has decided to start him on oral isotretinoin.

Which of the following pairs of laboratory tests are required before and during treatment with oral isotretinoin?

(Please select 1 option)

- Liver function tests and fasting lipid levels [Correct]
- Liver function tests and platelet levels
- Platelet levels and serum electrolytes
- Serum electrolytes and fasting lipid levels
- Serum electrolytes and liver function tests

Liver function tests and fasting lipid levels are the correct tests. The other pairs of laboratory tests are not required during treatment with oral isotretinoin.
A 52-year-old woman comes to the dermatology clinic for review. She has suffered from blisters and ulcers which have progressed over a number of months to include extensive areas of her upper body, arms and legs. The blisters are painful, but pruritis is minimal. She has a past medical history of hypertension for which she takes lisinopril and indapamide. She also suffers from epilepsy for which she takes carbamazepine.

On examination her BP is 128/80, pulse is 75 and regular. You confirm extensive, flaccid blisters, some of which have been de-roofed. The oropharynx is relatively spared.

Which of the following would you expect to find on skin biopsy?

(Please select 1 option)

- Granuloma formation with neutrophilic infiltrates
- IgG deposition at the dermo-epidermal junction  ★ Correct
- Intercellular deposition of IgG
- Neutrophils within the dermal papillae
- T cell infiltration within the dermis and the dermo-epidermal junction

The answer is IgG deposition at the dermo-epidermal junction. The clinical presentation here is consistent with bullous pemphigoid, which occurs as a result of IgG antibodies which bind to the skin basement membrane. This accounts for the findings on biopsy. Oral lesions are less typically seen in pemphigoid compared to pemphigus where they are much more common.
Granuloma formation with neutrophilic infiltrates is seen in patients with erythema nodosum, which has a number of associations but the lesions are more characteristically present only on the shins and do not blister.

Intercellular deposition of IgG is seen in pemphigus vulgaris, where oral lesions are much more prominent. Neutrophils in the dermal papillae are a feature of dermatitis herpetiformis, which is a pruritic skin rash classically located on the elbows and associated with coeliac disease. T cell infiltration is seen in Stevens Johnson syndrome, which is a rapidly progressive condition characterised by flu-like symptoms followed by an extensive erythematous rash (including the mucosal surfaces) which subsequently blisters.
A 42-year-old man is reviewed prior to discharge having been diagnosed with tuberculosis. He has been commenced on quadruple anti-tuberculous therapy and review is planned in the outpatient clinic. He mentions an irritating red rash affecting both shins, and wants to discuss if treatment is warranted.

On examination you identify erythema nodosum.

Which of the following is the most appropriate intervention?

(Please select 1 option)

- Oral corticosteroids
- Reassure that it will resolve
- Topical antibiotics
- Topical diclofenac
- Topical potassium iodide

Reassurance that this condition will resolve is the most appropriate action here. The most likely cause for erythema nodosum (EN) in this case is the tuberculosis. Given that he is committing to quadruple antibiotic therapy, you would expect the EN to resolve as the infection subsides and therefore no specific treatment for the EN is warranted.

Topical diclofenac and antibiotics are not effective in this situation. The underlying panniculitis which is responsible for EN is not infective in nature, and responds best, if required to topical potassium iodide.
iodide. Oral corticosteroids may blunt his immune response to TB and should therefore be avoided. In summary, topical potassium iodide can be considered in patients with very troublesome EN, but other treatment isn't indicated in this situation.

Answer Statistics

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1 11%
2 80%
3 1%
4 5%
5 4%
Times answered: 2475

Test Analysis

Correct Incorrect Partially Correct

Score: 65.57%
Total Answered: 61

Feedback
Work Smart

Question 62 of 63

An 18-year-old man with poorly controlled eczema comes to the Emergency Department complaining that his symptoms have deteriorated significantly and he has crops of painful itchy vesicles, affecting in particular the patches of eczema in both cubital fossae and on the back of his left leg. He also has a fever and feels like he has a mild cold. On examination his temperature is 37.8°C, BP is 110/70, pulse is 85 and regular. On examination, there is obvious flexural eczema which is poorly controlled, covered with extensive crops of vesicles, some of which have been de-roofed to form ulcers. Blood testing reveals a mildly elevated CRP, but remaining investigations are unremarkable.

Which of the following is the most appropriate intervention?

(Please select 1 option)

- **Aciclovir**  
- Flucloxacillin
- High dose topical corticosteroids
- Oral corticosteroids
- Varicella Zoster Immunoglobulin

The answer is Aciclovir. This patient’s vesicular rash is most likely due to herpes simplex infection, superadded over the eczema rash: a condition known as eczema herpeticum. Patients with poorly controlled eczema are at increased risk of developing disseminated infection. It is a dermatological emergency, and oral aciclovir should be initiated immediately. Parenteral treatment is usually only required if a patient is unable to take tablets, or their condition is deteriorating despite oral medication.
The superficial infection isn't bacterial, flucloxacillin is therefore not of value. VZIG is not of value because the rash is related to herpes simplex infection, and further use of corticosteroids risk spreading the vesicles further (although topical steroids can sometimes be used if the atopic rash is severe).

Further reading:

DermNet New Zealand: Eczema herpeticum

**Answer Statistics**

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Times answered: 2425

**Test Analysis**

Correct Incorrect Partially
Correct

Score: 66.13%
An 18-year-old student presents to the Emergency Department with an extensive erythematous rash. He has a no past medical history of note and tells you that he suffered a streptococcal throat infection two to three weeks earlier, for which he took a one-week course of antibiotics.

Apparently, the rash has appeared virtually overnight. On examination, he has multiple erythematous papules and plaques on his trunk and upper arms with superficial scaling. Vital signs are normal.

Which of the following is the most likely diagnosis?

(Please select 1 option)

- Drug eruption
- Guttate psoriasis - This is the correct answer
- Lichen planus
- Pityriasis lichenoides
- Pityriasis rosea

The answer is guttate psoriasis. Guttate psoriasis is characteristically said to occur two to three weeks after a streptococcal infection. Multiple psoriatic plaques can appear over a short period of time, the palms and soles are rarely affected, and the plaques are mildly itchy and usually self-limiting, resolving over a period of a few days/weeks. UV-B radiation therapy may accelerate plaque resolution in patients with extensive disease. The disease is seen more commonly in patients with certain HLA types, namely HLA-BW17, HLA-B13, and HLA-CW6.
A drug eruption is unlikely two weeks after completion of the course of antibiotics, and pityriasis rosea normally begins with a herald patch on the chest.

Pityriasis lichenoides is a possible differential, although acute disease normally occurs as a papular rash rather than the psoriatic plaques seen here. Similar to pityriasis rosea, lichen planus usually affects a limited area of skin at onset.

**Answer Statistics**

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Times answered: 2431

**Test Analysis**

Correct Incorrect Partially
Correct

Score: 65.08%
Total Answered: 63