

Dermatology at a Glance: Key revision points

Chapter 1: Evidence based dermatology

- There are many influences on clinical decision taking that may be patient, physician or practice-related.
- Clinical decisions should ideally be based on evidence.
- The best guidelines are created using formal methods and are evidence based.
- Systematic reviews identify current evidence and knowledge gaps.
- National research networks are necessary in order to recruit enough patients to undertake clinical research on rare skin diseases.

Chapter 2: Dermatology: the best on the web

- British clinical dermatology guidelines: www.bad.org
- Quality of life questionnaires: www.dermatology.org.uk
- Evidence based dermatology: <http://skin.cochrane.org>
- Patient information leaflets: www.bad.org.uk
- Dermatology images: www.dermis.net

Chapter 3: Dermatology: then and now

- The first printed skin disease book was in 1572, and the first in English in 1712 by Daniel Turner.
- The skin disease classification and nomenclature used today is based on that suggested at the start of the nineteenth century.
- Dermatology became an established speciality in the nineteenth century and by the twenty-first century has many sub-specialties.
- Dermatology knowledge and research became disseminated by the founding of many dermatology journals in the nineteenth and twentieth centuries.
- Skin diseases and their effects have been the subject of films, TV dramas, books and paintings, and they have influenced diverse activities including pop music and politics.

Chapter 4: How the skin works

- Skin has a unique position at the interface of the body and the hostile external environment and the stratum corneum has a critical barrier role.
- There are a huge number of possible pathogenic processes that may affect the skin, including those that may affect any internal organ and those resulting from its external site.
- Skin has several critical functions essential to life, such as providing a barrier to water loss and regulating body temperature.
- Severe disease results in skin failure, high morbidity or even death.
- There are many regional variations in the details of skin structure that may influence disease processes and ability to treat.

Chapter 5: The burden of skin disease

- Skin disease can affect life quality 'now', can influence major life-changing decisions and can affect the lives of close family members.
- Try to understand both the patient's and the relative's experience related to the skin disease and think of ways to improve their situation.

- Remember to use the routine question ‘How much is your skin disease affecting your life at the moment?’
- Measurement of skin disease impact may help improve clinical decisions.
- A Dermatology Life Quality Index (DLQI) score >10 indicates that the clinician should be considering more active intervention to help the patient.

Chapter 6: Taking the history

- A structured history is essential for diagnosis and management.
- Don’t skimp on the history just because the disease is visible.
- The history structure needs to cover all the standard topics, but each with an extra dermatological angle.
- If you don’t take a detailed history you will miss essential information.
- Drug details, past response to treatment, family history and relationship to work are key aspects.

Chapter 7: How to examine skin

- It’s tempting to only look at the skin areas mentioned by the patient. But if you don’t examine the skin fully, you may make the wrong diagnosis or prescribe the wrong treatment.
- Remember to ‘Start at the top, and work your way down.’
- Make sure you can see the skin well: good light, patient undressed.
- Have a ruler, magnifying glass and dermatoscope available and use them!
- Keep clear records of history and examination.

Chapter 8: Surgical basics

- Simple surgical procedures are now commonly undertaken for diagnosis and management.
- No surgery should be considered ‘minor’.
- Give a full explanation of what is planned to the patient prior to the procedure.
- Warn all patients regarding possible complications such as bleeding, infection and scarring. Uncommon complications should also be mentioned especially if they have serious consequences such as nerve damage.
- Do not start procedure unless the patient is 100% sure he/she wishes to proceed.

Chapter 9: Key procedures

- Liquid nitrogen cryotherapy is quick and easy to use for treatment of viral warts, solar keratoses and seborrhoeic warts. Less commonly this can be used to treat Bowen’s disease, superficial basal cell carcinomas and small squamous cell carcinomas.
- Cryosurgery is painful and can leave disfiguring pigmentary changes and/or scarring.
- Botulinum toxin can be used for treatment of axillary hyperhidrosis.
- Laser treatments are widely available; however, the appropriate laser needs to be determined by the type of lesion to be treated.
- Mohs’ surgery is a very specialised technique used to remove ill-defined tumours at critical sites.

Chapter 10: Topical therapy

- Very inflamed skin is disabling and uncomfortable: urgent effective treatment is indicated.
- Potent topical steroids used short term have minimal risks: don’t under-treat.
- Potent topical steroids used continuously long term can cause serious local and systemic side effects.

- A fingertip unit weighs 0.5 g and spreads over two handprints.
- Estimate how much drug needs to be put on at each application and explain this to the patient.
- Poor adherence to advised therapy is very common.

Chapter 11: Practical special management

- Dermatology day care services have an important role in education, treatment and monitoring of patients with a wide range of dermatological diseases.
- Educating patients about their disease and treatment regimens helps improve treatment compliance.
- Excess sweating (hyperhidrosis) of the hands and feet can be treated with iontophoresis.
- Radiotherapy is a non-surgical treatment option for management of skin malignancies.

Chapter 12: Psoriasis

- Search for and treat the co-morbidities as well as the psoriasis.
- Match the aggressiveness of intervention to the impact of the disease on the patient's life.
- Compliance with therapy is very difficult in this chronic disease. Make treatment as simple as possible.
- Systemic therapies now have the potential to suppress even very severe psoriasis.
- The vast majority of people with psoriasis use topical therapy alone.

Chapter 13: Atopic dermatitis

- Aetiology of atopic dermatitis (AD) is multi-factorial, with genetic and environmental influences, epidermal barrier defects, penetration of exogenous agents into the skin and activation of the immune response.
- Management of AD includes regular moisturising, control of acute flares with topical corticosteroids and maintaining remission with topical calcineurin inhibitors with avoidance of potential triggers.
- Possible causes for flare-up of AD include poor treatment compliance, super-added infection or allergic contact dermatitis.
- AD may be complicated by staphylococcal bacterial infection and/or herpes simplex viral infections and/or erythroderma.
- Allergic contact dermatitis to patient's own topical treatments (e.g. steroids and/or the preservatives) should be considered in those with treatment-resistant AD.

Chapter 14: Acne and teenage skin

- Skin diseases can have a psychological impact in teenagers.
- Pathogenesis of acne is multi-factorial and includes hyper-keratinisation, shedding and accumulation of keratinocytes within the pilosebaceous unit, androgen-stimulated increased production of sebum and proliferation of *Propionibacterium acnes* leading to dermal inflammation.
- The clinical spectrum of acne ranges from comedones, papules, pustules, nodules to cysts.
- The complications of acne include scarring ranging from subtle pitted ('ice-pick') to keloid scars and the psychological distress due to the disease itself and subsequent scarring.
- Treatment of acne depends on disease severity. Treatment options include topical anti-bacterials with/without antibiotics, topical retinoids, oral antibiotics, anti-androgens (for females only) and oral isotretinoin.

Chapter 15: Common inflammatory diseases

- Lichenoid eruptions can be due to a number of causes including lichen planus, drug eruptions, and graft versus host disease.
- Lichen planus can have many clinical patterns including mucosal. Nail changes and scarring alopecia of the scalp can occur.
- Lichenoid drug reactions can mimic idiopathic lichen planus.
- Pityriasis rosea is usually an acute self-limiting disease in children and young adults.
- Graft versus host disease should be considered in any lichenoid skin eruption in severe haematological conditions.

Chapter 16: Acute dermatology

- Dermatological emergencies can be potentially life-threatening.
- Comprehensive clinical history is essential to identify the cause.
- Most common causes are underlying skin diseases or drugs.
- Principles of the management of most dermatological emergencies include identifying and treating or withdrawing the underlying cause, supportive care in a high-dependency environment and prevention of complications.
- Individuals with a history of angio-oedema and anaphylaxis should wear a Medic Alert bracelet and carry an EpiPen®.

Chapter 17: Blistering skin diseases

- Common causes of skin blistering include insect bites and severe sunburn.
- Intense pruritus may precede the onset of blisters in bullous pemphigoid and dermatitis herpetiformis.
- Direct immunofluorescence is essential to diagnose autoimmune bullous diseases.
- Mucosal surfaces may be affected in blistering skin diseases.
- Patients on long-term high dose oral steroids for some blistering skin diseases (e.g. bullous pemphigoid) need osteoporosis prophylaxis and monitoring for steroid-induced hypertension and diabetes (glycosuria and raised serum glucose).

Chapter 18: Bacterial infections

- Correct diagnosis of infections is essential. Topical steroids make infection worse.
- If signs of cellulitis or erysipelas (e.g. redness and tenderness), systemic antibiotics are essential.
- Both erythrasma and pitted keratolysis are, surprisingly, bacterial infections and so both respond well to topical antibiotics.
- Remember the importance of travel history in the diagnosis of infections acquired abroad.
- An enlarging red circle should suggest investigating for Lyme disease.

Chapter 19: Viral infections

- Viral infections are extremely common and can affect all ages.
- Common viral warts are caused by the human papilloma virus types 1, 2 and 4 and can present on children's fingers, hands and feet.
- Herpes simplex and herpes zoster need to be treated within 1–2 days of vesicular lesions.
- Check HIV status in all patients with atypical herpes or viral infections.
- If aciclovir is ineffective remember resistance may occur.

- Beware eczema herpeticum in any acute severe flare of eczema presenting with vesicles especially on the face.

Chapter 20: Fungal infections

- The key sign of fungal infections is superficial scaling.
- The toe webs are the main site for dermatophyte infections. Always also check the toe webs if you suspect a fungal infection elsewhere.
- If fungal infections are incorrectly treated with topical steroids, there is temporary improvement, then the problem gets worse (tinea incognita).
- Pityriasis versicolor, seborrhoeic dermatitis and dandruff are all caused by overgrowth of *Malassezia* species.
- Oral thrush, caused by *Candida albicans*, may be the presenting sign of HIV infection.

Chapter 21: Skin infestations

- Scabies, head lice and body lice are all spread by direct person-to-person contact.
- Close contacts need to be treated at the same time as the index case during management of scabies, head lice and body lice.
- Topical 0.5% malathion is the preferred treatment option for treatment of scabies or head lice in pregnant women and children.
- Crusted scabies is severe infestation with scabies resulting in hyperkeratosis of the skin including the subungual skin; this is treated with oral ivermectin.

Chapter 22: Tropical skin disease

- Tropical skin disease should be borne in mind when a patient presents with a skin rash following recent travel abroad.
- Incubation period of leishmaniasis and leprosy can be many years.
- A skin biopsy helps confirm the diagnosis of leishmaniasis and leprosy.
- Cutaneous leishmaniasis may progress to the mucocutaneous form, leading to severe destruction of mucous membranes. Untreated visceral leishmaniasis is potentially fatal.
- Leprosy is a notifiable disease in the UK.

Chapter 23: The red face

- It can be difficult to diagnose the cause of a red face. A good knowledge of differential diagnoses is required.
- Look for specific pointers in the history and examination to confirm the diagnosis.
- Consider specific blood tests for systemic lupus erythematosus and patch testing for contact allergy.
- Keep an open mind and review the diagnosis if the facial eruption is not improving.
- Topical steroids can worsen rosacea, perioral dermatitis and tinea faciei.

Chapter 24: Oral and genital disease

- Genital and oral mucosal diseases may be localised or be part of a generalised skin disease (e.g. lichen planus).
- Differential diagnosis of recurrent mouth and/or genital ulcers include Behçet's disease, cicatricial pemphigoid, pemphigus, infections (e.g. syphilis) or drug-induced causes.
- Sexual contacts of those with sexually transmitted infections should be traced and treated.

- Genital warts are caused by human papilloma virus (HPV). HPV types 16 and 18 are associated with pre-malignant and malignant transformation of the genital skin.
- Non-healing oral and/or genital ulcers or lesions should be biopsied to exclude pre-malignant or malignant disease.

Chapter 25: Nail and hair disease

- Hair and nail diseases may be congenital or acquired.
- Hair and nail disease may be seen in isolation and independent of each other or associated with skin or systemic disease (e.g. lichen planus of the skin, nails and scarring alopecia).
- Hair loss may be localised or diffuse, scarring or non-scarring.
- Spontaneous hair re-growth is common in alopecia areata; poor prognostic factors predict progression of alopecia.
- Subungual melanoma should be considered if subungual hyper-pigmentation is present. A longitudinal nail biopsy will confirm the diagnosis.

Chapter 26: The newborn

- Skin barrier function is impaired in premature neonates, and hence they are at increased risk of systemic absorption of topical corticosteroids, infections, hypothermia and dehydration.
- Common benign skin manifestations in the newborn infant include seborrhoeic dermatitis, transient cutis marmorata, miliaria, Mongolian blue spots (commonly in neonates of Asian, Oriental or Afro-Caribbean origin).
- Vascular malformations involving the trigeminal nerve distribution may be associated with glaucoma and intra-cranial complications.
- Majority of infantile haemangiomas regress spontaneously and do not require intervention unless complications or interference with vital functions occur.
- Giant congenital melanocytic naevi are associated with a small, but significant risk of malignant melanoma.
- Neonatal lupus erythematosus is caused by trans-placental transfer of maternal auto-antibodies (anti-Ro antibodies) and can lead to congenital heart block.

Chapter 27: The child with a rash

- Common childhood skin diseases include atopic eczema, molluscum contagiosum and viral exanthems.
- Children with urticaria pigmentosa should avoid trigger factors that may result in massive endogenous histamine release leading to shock.
- The vasculitic process in Henoch–Schönlein purpura may affect the kidney and/or gastrointestinal tract in addition to the skin. Renal involvement determines the disease prognosis and need for a course of systemic steroids.
- A febrile child with a non-blanching petechial or purpuric rash should be treated promptly with systemic antibiotics for presumed meningococcal septicaemia until proven otherwise.
- Children with suspected Kawasaki's disease should be treated promptly with intravenous immunoglobulins and high-dose aspirin to minimise cardiovascular complications.

Chapter 28: Skin problems in pregnancy

- Common pregnancy-associated skin manifestations include increased pigmentation (e.g. areola of breast, melasma), spider naevi, striae, telogen effluvium, skin tags.

- Pemphigoid gestationis and intra-hepatic cholestasis of pregnancy can be associated with adverse fetal outcome.
- Malignant melanoma, although rare, is one of the most common malignancies presenting during pregnancy and may metastasise to the placenta and fetus. Clinically suspicious lesions should be completely excised promptly for a histological diagnosis.
- The effect of pregnancy on pre-existing skin diseases is variable. Psoriasis and acne generally improve, whereas atopic eczema worsens. However, psoriasis and acne may worsen post-partum.
- Topical corticosteroids are safe when used sparingly, under medical supervision, for treatment of certain skin diseases during pregnancy (e.g. severe eczema, pemphigoid gestationis, polymorphic eruption of pregnancy).
- Risk–benefit ratio to the mother and foetus should be considered in consultation with the obstetrician when using systemic therapy for skin diseases during pregnancy.

Chapter 29: Elderly skin

- Elderly individuals are often on multiple systemic medications, some of which may cause skin diseases (e.g. peri-anal ulceration due to nicorandil).
- Common benign skin lesions in the elderly include seborrhoeic keratoses, Campbell de Morgan spots and solar keratoses.
- Elderly individuals may present with advanced skin malignancies due to delayed presentation.
- An underlying malignancy may need to be excluded in patients presenting with xerosis and pruritus.
- Elderly patients on prolonged systemic steroid treatment should be monitored for hypertension, diabetes, and given prophylaxis for osteoporosis and gastritis.

Chapter 30: Cutaneous allergy

- Contact dermatitis can be irritant or allergic and occurs when a substance or chemical comes into contact with the skin.
- Irritant contact dermatitis (ICD) is more common than allergic contact dermatitis (ACD).
- Always think of contact allergy in non-resolving dermatitis.
- Patch testing is a specialized technique where allergens are applied to the patient's back to detect allergic delayed hypersensitivity.
- Overlap of ICD, ACD and endogenous eczema is common.
- Prick testing is primarily used to detect allergens causing type 1 (IgE mediated) or acute hypersensitivity reactions.

Chapter 31: The working hands

- Hand eczema accounts for 90% of all occupational skin disease patients.
- Hand eczema has a poorer prognosis in atopic individuals especially if severe with a long history.
- Contact allergy to allergens such as chrome may lead to persistent hand eczema even after avoidance of the allergen.
- Hand psoriasis can look similar to hyperkeratotic hand eczema.
- Consider all differentials for work related hand skin disease and review diagnosis if no better.

Chapter 32: Urticaria

- Acute urticaria usually lasts <6 weeks.
- Chronic urticaria can be long lasting (years) with no cause found in 80% of patients.

- Urticaria presents as itchy erythematous macules and wheals with pink swollen raised areas with a surrounding flare.
- In ordinary urticaria the wheals resolve within 24 hours.
- Management of urticaria can be difficult requiring combination of antihistamines.
- Corticosteroid therapy makes further control of urticaria extremely difficult.

Chapter 33: Benign skin lesions

- Benign skin lesions are very common and constitute a large number of skin consultations in general practice.
- Reassure the patient the lesion is benign if 100% certain.
- Warn patient explicitly regarding possible scar and poor cosmesis with any treatment to remove benign lesions.
- Do not treat a benign lesion unless patient 100% sure wants to proceed.
- Removal of benign moles may leave residual pigment and hair growth.

Chapter 34: Non-melanoma skin cancers

- Non-melanoma skin cancer is increasing due to the increasing elderly population.
- Basal cell carcinoma (BCC) prognosis is excellent with metastases being very rare.
- Squamous cell carcinoma (SCC) prognosis is variable depending on the histological differentiation and body site affected.
- High risk sites need to be treated urgently for both BCC and SCC.
- Mohs' surgery may be required to ensure complete removal.

Chapter 35: Malignant melanoma

- Malignant melanoma incidence is increasing.
- Malignant melanoma causes 80% of skin cancer deaths.
- Malignant melanoma with Breslow thickness <1 mm has better prognosis.
- Always fully remove any suspected melanoma.
- Beware 'ugly duckling' sign: it may help detect irregular moles needing removal.

Chapter 36: Other malignant skin conditions

- Cutaneous T-cell lymphoma (CTCL) is difficult to diagnose and may require multiple biopsies over many years.
- New nodules arising in previous patch stage CTCL may suggest transformation to a higher grade.
- Erythroderma with no previous skin disease should ring alarm bells: do a skin biopsy to exclude CTCL.
- Kaposi's sarcoma may be an initial sign of HIV or AIDS related disease.
- Cutaneous metastases are rare but may indicate a poor prognosis. The three most common causes are breast cancer, gastrointestinal cancer and melanoma.

Chapter 37: Pigmentation

- Inflammatory skin disease often alters skin pigmentation.
- Drugs that can cause pigmentation include amiodarone, minocycline and clofazimine.
- Attempts to alter skin pigmentation may make matters worse, so proceed with caution and first allow natural recovery.
- Vitiligo causes major psychological and social problems in some cultures.
- Skin camouflage is very helpful in the absence of effective treatment for pigmentary disorders.

Chapter 38: Sun and skin

- Both UVA and UVB exposure can cause long-term photoageing and immediate tanning effects.
- Sun exposure leads to photoageing which can be irreversible.
- Sunscreens need to be used regularly and in sufficient amount to have protective effects.
- Do not use sunscreens to prolong time spent in the sun.
- Sun exposure leads to vitamin D production and avoidance of sun can lead to vitamin D deficiency.

Chapter 39: Phototherapy

- 'Skin type' of an individual describes the tanning and burning response of individuals to natural sunlight as well as to phototherapy.
- Skin diseases commonly treated with PUVA photochemotherapy include widespread plaque psoriasis, cutaneous T-cell lymphoma and vitiligo. Palmo-plantar pustulosis can be treated with localised hand and foot PUVA.
- Skin diseases commonly treated with UVB include widespread guttate or plaque psoriasis, widespread atopic eczema and cutaneous T-cell lymphoma.
- UVB phototherapy is considered relatively safe in treating skin diseases during pregnancy and breast feeding (e.g. psoriasis, widespread atopic eczema).
- Patients receiving phototherapy should be counselled about the risk of skin cancer and educated to self-examine their skin to identify suspicious skin lesions.
- Photodynamic therapy (PDT) is a form of phototherapy that utilises high intensity visible light and is used for the treatment of pre-malignant skin lesions (solar keratoses, Bowen's disease) and superficial basal cell carcinomas.

Chapter 40: Photodermatoses

- Photodermatoses are skin diseases that are precipitated or aggravated by exposure to a single wavelength or a combination of different wavelengths of light including ultraviolet A, UVB and visible light.
- A rash in light-exposed sites should raise the possibility of a photodermatosis.
- Photo-protection is essential in the management of all photodermatoses.
- Patients with severe photodermatoses may require supplementation to avoid vitamin D deficiency due to decreased sunlight exposure.
- Certain inflammatory skin diseases may be exacerbated by sunlight (e.g. rosacea, cutaneous discoid lupus erythematosus) or improved with sunlight (e.g. psoriasis).

Chapter 41: Skin signs of systemic disease

- Skin changes are often critical clues to systemic disease.
- The same pattern of disease can have several causes (e.g. erythema nodosum, pyoderma gangrenosum).
- Skin diseases may be altered by systemic disease. Pityriasis versicolor and psoriasis may become worse in HIV infection and viral warts may become worse on immunosuppressive drugs.
- Skin diseases may be the first signs of systemic cancer (e.g. mauve facial rash of dermatomyositis), or necrolytic migratory erythema (glucagonoma).
- Xanthelasma around the eyes indicates increased risk of heart disease.

Chapter 42: Autoimmune diseases and vasculitis

- Lupus erythematosus has a wide range of manifestations ranging from localised chronic skin disease in discoid lupus erythematosus (DLE) to systemic lupus erythematosus (SLE) with multiple organ disease.
- All forms of lupus erythematosus need strict sun avoidance.
- CREST syndrome is a localised form of scleroderma with Calcinosis, Raynaud's disease, oEsophageal dysmotility, Sclerodactyly and Telangiectasia.
- Dermatomyositis is an idiopathic connective tissue disease that may be linked with underlying malignancy especially in the elderly.
- Suspected vasculitis should be urgently investigated and treated.
- Think widely for causes of vasculitis including drugs, infections and systemic diseases.

Chapter 43: The immunosuppressed patient

- Always consider HIV infection if skin conditions are severe, atypical and less responsive to standard treatments.
- Drug therapy for HIV infection may cause skin problems including dermatological emergencies such as Stevens–Johnson syndrome or toxic epidermal necrolysis.
- Immunosuppressed patients present with a wide range of common skin conditions which may be more severe and persistent (e.g. viral warts).
- Skin cancers in immunosuppressed transplant patients may be more aggressive and metastasize early. Full surgical clearance of the tumour and close monitoring is required.

Chapter 44: Psychodermatology

- Skin diseases primarily caused by psychological problems include factitious dermatitis and delusional infestation.
- There is a suicide risk in body dysmorphic disorder: don't dismiss it.
- Neurodermatitis consists of a vicious cycle of itch, excoriation, lichen simplex and nodular prurigo.
- Educational and psychological training programmes can improve the quality of life of patients with chronic skin disease.
- Joint psychodermatology services with dermatologists and psychologists or psychiatrists working together provide the most effective care.

Chapter 45: Skin breakdown

- Ankle Brachial Pressure Index is the ratio of the systemic blood pressure between the arm and the leg. If the leg pressure is low, this indicates arterial disease and so pressure bandaging would make things worse.
- Compression bandaging is critical for venous leg ulcer healing.
- Lipodermatosclerosis has inflammation but no infection: do not confuse it with cellulitis.
- All wounds have surface bacteria, but antibiotics are only needed if there is evidence of cellulitis.
- Burns may be partial (superficial or deep), or full thickness.

Chapter 46: Hereditary skin diseases

- A detailed family history is essential in inherited skin diseases.
- Genetic counselling should be offered to those with inherited skin diseases.
- The mainstay of management of ichthyosis is emollients and/or keratolytics and acitretin for severe cases. For epidermolysis bullosa avoid or prevent skin trauma and wound infections.

- Inherited skin diseases may be associated with extra-cutaneous complications (e.g. some forms of epidermolysis bullosa, neurofibromatosis 1, tuberous sclerosis).
- Oral retinoids (acitretin) can be beneficial in some inherited skin disorders. However, acitretin is teratogenic so use it with extreme caution in females of child-bearing age.