



Network

Journal of Biomedical Illustration

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Volume 8, Issue 1, 2003

The Journal of Biomedical Illustration serves to provide the Australian Institute of Medical and Biological Illustration and the wider community of specialist photography, artistry and image making with a platform for the exchange of knowledge, ideas and information.

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Cover Design: Marcus Cremonese

Cover Printing: Donation by Canon Australia,
Foto Riesel and Medici Graphics

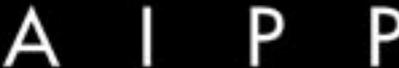
Network will be very short for this on-line edition. Unfortunately the editor has too much work to do and I guess 'they' are paying my wages!

As promised the Medical Dictionary by Michael Shapter and Frank Appleton is available with edition as a PDF. Thank you to Michael and Frank for a excellent effort.

It's amazing that most of the articles within Network are often from the same people! I am sure there are other people out there with some interesting information to pass on? Many thanks to those people who have contributed to Network since I have been editor - the quality of the articles and images have been excellent, keep up the great work

Julie Murray
Editor
March 2003

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Welcome to the first Network for 2003. Our editor, Julie Murray has my sincere admiration for the effort she has put into constantly improving our journal and thereby into promoting AIMBI. Special thanks from

National Council go to Canon and Foto Riesel for sponsoring the cover of the most recent (and best yet) Network journal.

At the recent National Council election of office bearers, Rebecca Davies from Victoria agreed to take on the position of Promotions Officer (congratulations!). Rebecca has some new ideas for AIMBI, and I would like to invite everyone to contribute their own ideas about promoting AIMBI, especially about recruitment of new members, by forwarding them to Rebecca.

The position of National Registrar has changed hands. On behalf of the entire AIMBI membership I would like to thank Mr. Ian Turner for the work he has done in maintaining the AIMBI National Register over a period spanning more than 20 years (longer than I go back). This sterling effort, and the extraordinary contribution you have made to AIMBI is very much appreciated, Ian. Welcome to David Robinson, the new Registrar.

Julie Murray and Heather Matthews have recently been representing AIMBI's views on Photographic Education and Training as part of an industry taskforce which includes members from AIPP, and other organisations. Their aim was to look at and propose what needs to be included in Photographic Imaging Training Packages to adequately meet the needs of the photographic industry of today.

I was fortunate recently to attend the second Tasmanian conference, in Hobart this year. "Celebrating the Diversity of Photographic Imaging", was a fine product of the sheer hard work of Danielle Edwards and Gale Spring and their assistants. A very interesting and memorable series of speakers, included stars (excuse the pun) like astronomy photographer David Malin, and a large and (unexpectedly) excellent quality local photography contingent such as; Karen Gowlett-Holmes - marine biology, Richard Bennett - yacht racing, Alan Moyle - landscapes etc. etc. and Wayne Papps - Antarctic panoramas. Highlights included visits to Kevin Bell's department at Antarctic Division, and to the TMAG (Tasmanian

Museum & Art Gallery), and (of course!) the twilight dinner cruise on the Derwent River.

Finally, could I remind everyone that the AIPP awards are being held in May. It would be great to see more entries from AIMBI members in the Biomedical section, and even better, an AIMBI winner. (So start planning now!)

All the Best for 2003.
Angela Chappell

RESIDENT'S REPORT



Digital Web News

Happy new year to Imagemakers.

The holiday season is over and imaging goes on, I would first like to share with you my experiences on Christmas Day, I attended the usual lunch round the pool but one of the guests had a new Casio EXILIM 2-meg credit sized digital camera. Taking many "Snaps" using the LCD viewer to compose and view, she was the centre of attraction and I was in awe of the event. It was a very graphic example of how image making is changing, not only technically but the human reaction to instant photos.

The Casio Camera is a great design and of enough quality to achieve an 8*6 inch print or even a 10*8. There is now of course a newer model the EXILIM EX-Z3, a 3.1 mega pixel with a 35-105mm zoom.

More info at http://www.dpreview.com/reviews/specs/Casio/casio_exz3.asp .

Casio is using its electronic expertise with a Pentax Lens in a very compact design. Pentax have a similar model and this site has detailed info

<http://www.dpreview.com/news/0301/03010801pentaxoptios.asp>

It is logical that manufactures are combining there skills to produce great digicams using lenses from makers Pentax/Canon/Lecia/Zeiss in traditional electronic manufactures like Casio/Panasonic/Sony. A very interesting mix in the soup which is always on the simmer, and the announcement that Konica and Minolta are considering a merger is a sign of the times.

More info at <http://www.dpreview.com/news/0301/03010701konicaminoltamerger.asp>

My apologies to the Pro'S out there for so far talking of the low end "Point and Shoot" style but these new cameras are making inroads into everyday work and awareness of them in my view is compulsory.

Storage improves to with memory sticks of up to 1Gig have being announced by Sony and Lexar, and Hitachi have a 4Gig Hard Drive for Compact Flash 2 Cards later this year info at

<http://www.hgst.com/about/news/20030106-5.html>

Mac verses PC "Let the Game Begin"

If you look back just a few years in computer history the Mac and Photoshop were the first productive graphic machines and many still use Macs from ether habit or head in the sand thinking. As a PC user I am always amazed at how Mac Users swear that there system is better and Photoshop is the "Only Program to Use" for images editing. The computer industry is now about 10% Mac and decreasing, and Mac Users pay more for software and have less to chose from. There are Photoshop like Programs for PC that are 20% the price of Photoshop, PaintShopPro and PhotolImpact just to name 2, and not to mention the hundreds of other image/DTP programs. So this site with a comparison of the speed of Macs and PCs is worth a look before you decide to upgrade your Computers.

Here is the site comparing Mac and Pc using Photoshop, maybe Mac is falling behind.

http://www.robgalbraith.com/diginews/2003-01/2003_01_07_macpc.html

That's all for this issue, no doubt there will a lot more to report next time.....enjoy the read.

David Robinson

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Book Review: Images from Science

By Chris Barry

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RIT Cary Graphic Arts Press, 2002 Laminated paperback, full-colour illustrated, 8.5 x 8.5 inches 144 pages ISBN 0-9713459-9-6 US\$19.99. School of Photographic Arts and Sciences, Rochester Institute of Technology: michael peres <mrppph@rit.edu>

The following quotation is from the exhibit's comprehensive overview by Dr. David Malin from the Anglo-Australian Observatory in Melbourne describing the concept and philosophy of the book, "Images from Science is a catalogue of 58 photos from an exhibit at the Rochester Institute of Technology, created by two professors there, Michael Peres and Andrew Davidhazy. They started with a \$17,000 budget and the ambition to produce an exhibit, a website and a catalogue that would prove that science has much to contribute to the world of the artist and that aesthetic sensibilities are vital in creating and comprehending images from science. Scientists from all over the world submitted pictures that are delightful, gorgeous, and instructive. These include a colour micrograph of a transparent pregnant flea, a photo of a white blood cell attacking a group of bacteria, a sequence that translates the surface of the human brain into patterns of electronic circuits, dazzling views of stars and dozens of other subjects. The captions are models of clarity."

The book is excellently presented and printed with Australian photographers being well represented. Anni Payne: Milk and Honey Photography. Susanne Williams and Adrian Dyer: Royal Melbourne Institute of Technology. 2 images: Amanda Rebbechi, Prince of Wales Hospital, Medical Illustration Unit and finally, Chris Barry, Lions Eye Institute, Perth.

The aim of the book was to present scientific photographic images as an artform and Michael and coworkers have succeeded superbly in producing a wonderful book. They have added a magnificent new book showing that medical/scientific illustration can be both technical and artistic. I hope that other University departments can continue with this concept of bringing the cream of scientific images into the public realm.

Chris Barry: photographic exhibition

Karijini, 8-19th May 2003,

The Moores Building

Contemporary Art Gallery, 46 Henry Street Fremantle, Gallery 6.

Karijini is, arguably, one of the least known but most spectacular of the world's tourist destinations. The rocks originated as fine-grained sediment which accumulated on an ancient seafloor 2,500 million years ago. Many of these sediments laid down in the oceans were rich in iron and silica. The gorges were eroded when a sharp drop in sea level caused the rivers to down-cut rapidly, a process enhanced by the onset of a more arid climate, which depleted the protective vegetation cover on the valley sides.

In the 1980s, whilst screening aboriginal groups with eye complications from diabetes, I had a brief look at Karijini after passing close by and vowed to return one day. Having recently re-found an interest in personal photography and knowing that I would be working close to Karijini again (2002), I decided to pack the photo gear and take a side trip after completing a contract with an Aboriginal Medical group. The gorges are up to 100 metres deep and the descent and ascent is exhausting for the unfit like me. The area is rich in iron ore and blue asbestos was once mined here, hence the vivid colour of the rocks.

This is my fourth solo exhibition, but first for personal photography. The monochrome images shown here do not do justice to the fabulous rich red colours of the rocks and canyons which abound in the region and provide a the rich variety of photo opportunities.



Dictionary of Visible Diseases

by Frank Appleton and Michael Shapter
available as a pdf on the AIMBI website

Information

Dictionary of Visible Disease

with tips on photographic techniques

Michael Shapter MCA RBI FAIMBI MIMI RMIP

&

Frank Appleton PhD RBI

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A visible disease is one that has characteristics visible to an observer and which can therefore be photographed, usually using conventional photographic techniques.

Each dictionary entry is accompanied by a set of letters (upper case and lower case) and Roman numbers to indicate various photographic techniques. These are guides to achieving correct results and need to be used in accordance with broader photographic knowledge. There is no substitute for experimentation and standardisation in clinical photography.

Key to photography techniques

The equipment suggested for use with these techniques is a 35mm format film camera system. Different reproduction ratios and lenses will apply for other formats and digital cameras. Lens focal length will affect subject-to-camera distances and may need to be revised if photography space is limited. Photographing some subjects too near with short focal length lenses will distort perspective.

Lens characteristics

- a) The retina of the eye is photographed using a funduscope.
- b) The external eye is photographed using a macro-lens of approximately 105 - 200mm at a ratio of 1:1 or 2:1, with a ring flash attached or built in.
- c) The corneal surface of the eye is photographed using a camera attached to a slit lamp, or as b) with texture lighting iv).
- d) The head and face are photographed in the anterior position, and one or both lateral positions at a ratio of approximately 1:8 using a 105mm lens or similar. The scalp and inferior/superior and superior/inferior views of the chin, nose or other features of the head can also be photographed at these settings. Infants and children will require lower ratios which then should be standardised.
- e) The torso (anterior and lateral) and back including buttocks can be photographed at a ratio of 1:15 (lower with infants and children) using a 55 – 105mm lens.
- f) For full-length views of the body, anterior, posterior and laterals, a ratio of 1:50 (lower for infants and children) can be achieved with a 55mm lens or similar.
- g) Palmar, lateral and dorsal surfaces of the hand and plantar, lateral and upper surface of the foot can be photographed at a ratio of 1:8 with a 55mm lens.
- h) Intra oral views such as anterior views of teeth in occlusion are taken at a ratio of 1:3 with a 100 – 200mm lens with ring flash. Mirrors are used for arch views and lateral views.
- i) Arms and legs can be photographed without the torso shown by positioning a suitable background to isolate the limbs. A ratio set at 1:15 (lower for infants and children) using a 55 – 105mm lens can be used.
- j) Close-up views of any area of the body can be achieved with 55, 105 or 200mm lenses at ratios of 2:1, 1:1 or 1:2 depending on the size of the lesion.
- k) For extra-oral views use d) and some intra-oral views not covered in h) use ratios of 1:3 or greater. Special mirrors and lip retractors are useful for achieving more precise positioning and clearer views.

Lighting techniques (flash illumination is assumed, but incandescent lights may be used)

- ii) Flat or coaxial lighting is achieved with a light attached to the camera on, or near, the lens axis. Reflections from shiny surfaces can produce areas of poor information. For close-up views particularly of orifices a ring flash attached to the lens can be used. This is a specific type of coaxial light.
- iii) Contour lighting is achieved with a 3:1 lighting intensity ratio with the main light coming from the side of the subject at about 45 degrees to show contouring of the body.
- iv) Texture lighting is achieved when the light is falling from one side of the subject at a low angle to emphasise hollows, ridges or raised areas.
- v) Diffused or bounced illumination is achieved when light is reflected off a large, light-coloured surface to gain even illumination of the subject. In colour photography the reflective surface should be white to avoid colour casts on the subject. Diffused or bounced illumination is used as a substitute for the methods described above and should be considered as a fall-back method only if greater control of light is not available, except where diffusion is by specific photographic lighting equipment (eg umbrellas, softboxes).

Other techniques

- A) It may be desirable to include a scale in the image area separate from the subject matter. The usual place for the scale is along the bottom edge of the image, but other edges can be used. Scales are usually associated with close-up pictures of small objects but scales can also be used in photographs of children especially where growth is being measured and recorded, and in some adult photographs (scoliosis, etc). Scales may be placed on the patient when scars, lesions, etc. are being photographed close-up.

- B) In some conditions affecting the eyes (eg Mobius disease, strabismus, etc.) a nine-picture set of primary, secondary and tertiary positions of gaze is made at a ratio of 1:4 where the outer margins of the eyes are included in the frame.
- C) Fluorescence effects, invisible light techniques (IR & UV), the use of a Wood's, Burton, or other lamp are specialised methods requiring special training in application and health and safety issues.
- D) Sometimes it is necessary to photograph secretions, urine, etc. Photography of these by-products, usually presented in glass containers requires specialised lighting and exposure techniques. Infection control precautions must be observed.

Words and phases in **bold** typeface indicate anatomy, conditions or pathology that will be the subject photographed in association with the disease listed.

Abscess

An accumulation of **pus** within an organ or tissue. May present as a **swelling**.

d) e) i) j) ii) iii) iv) D)

Acrocephalia

Malformed, pointed **head**. d) iii)

Achromasia

Loss or absence of **skin** pigment.

d) e) i) j) iii)

Achondroplasia

An inherited disorder which prevents normal growth in the long bones. Patient presents with **short arms and legs, normal sized trunk and head** but the **base of the skull is small** and the **pelvis is narrow**. The comparative size of the cranium to the base of the skull sometimes leads to **bony changes** in the 'odontoid peg' on which the head pivots. Achondroplastic dwarfs are of normal intelligence. d) e) f) iii)

Acne

In *A. rosa* patient presents with **redness of forehead, nose and cheeks** with formation of **pustules**. *A. vulgaris* occurs on the **face, chest and back** with formation of **comedones (blackheads) then pustules**. See also Rosacea. d) e) j) iii) iv) D)

Acrocyanosis

Often associated with vasomotor defects it produces **blue appearance** of **hands and feet**.

g) iii)

Acromegally

Caused by an eosinophilic adenoma, a type of hyperpituitarism. The Pituitary gland produces excess Human Growth Hormone in adult life, this causes **enlarged supraorbital ridges, thickened ears, nose and tongue**, and an **enlarged lower jaw**. Patients develop a '**barrel chest**' and **kyphosis**. **Skin is oily** and **visibly sweaty**, (Diaphoresis). See also 'Gigantism'. d) e) f) iii)

Adactylia & ectrodactylia

Congenital **absence of fingers and toes** f) i) iii)

Addison's Disease

Caused when 90% of adrenal gland is destroyed. The patient shows signs of **weight loss** and **appears tanned** with a **bronzing of the skin** which is more noticeable on **hands**. **Pigmentation** may also occur in **mouth and vagina, alveolae of nipples** and in **skin creases, scars** may also become **pigmented**.

e) f) h) j) iii)

Adolescent mamoplasia

Temporary **enlargement of breast tissue** in **adolescent males** due to hormone imbalance.

e) f) iii)

Aglossia

Absence of tongue. h) ii)

Agnathia

Absence or defective development of jaw

d) iii)

Albinism

Albinism is an autosomal recessive trait thought to be due to defective tyrosinase, the enzyme of which converts tyrosine to melanine. It appears as **depigmented skin tissue**. Albinos suffer the same diseases as the normal population and may from time to time have medical photographs taken. It is important to remember that albinos cannot tolerate bright light and should be offered an eye shield. A suitable mask is given out by inter-national airlines for sleeping.

d) e) f) iii)

Albright's syndrome

Abnormal bone development, **excessive pigmentation of skin** and **precocious sexual development** occurring in females.

e) f) j) iii)

Amastia

Congenital **absence of breast tissue**. e) iii)

Amyloidosis

A disease which affects multiple organs including the **skin**. Patient presents with **raised papules** or **plaques** that have a **waxy appearance**. These are often situated in the **inguinal region**, in the folds of the **axillae** or around the **anus**. The **face** may be affected with lesions on the **ear** or **tongue**. Some patients have what appear to be '**black eyes**'. d) e) f) j) ii) iii)

Aniridia

Lack or defect of **iris**. b) ii)

Anthrax (Cutaneous)

Caused by a spore-forming bacillus which can lay dormant for centuries. Anthrax used to be common in those handling animal hides.

Spores are often found in horsehair used to reinforce plaster in old buildings. Anthrax can also infect the lungs if spores are inhaled. The disease causes a small **papule** at the site of inoculation which develops into **clear fluid filled vesicle**. Vesicles may form a **ring shaped cluster** which fuses together to form one **lesion**. Local oedema and erythema. Eventually forms an **ulcer with blue black central eschar**. The scab falls off to leave a scar.

d) e) f) j) iii) iv)

Atresia

Absence of a natural opening e.g. **anus** or **vagina**, usually congenital.
e) j) ii) iii)

Babinski's reflex or sign

Upward (dorsal) movement instead of downward (planter) **flexion of big toe when sole of foot is stroked**. Indication of motoneurone, damage or disease. Best capture with motion pictures but can be photographed.
g) iii)

Balanitis

Inflammation of **glans penis** and **prepuce**. e) j) iii)

Battle's sign

Caused by fractures to the base of the skull. Patient presents with a **bruise behind the ear** on the affected side. d) iii)

Behcet's Syndrome

A disease of unknown cause which affects young men: **inflammatory changes** affecting the **iris** (Uveitis), **mouth ulcers**, and **lesions** on the **genitals**. b) e) h) j) ii) iii)

Bell's Palsy

Facial paralysis in which the patients mouth droops on affected side probably due to swelling of nerve within facial canal. There is also **inability to close eye on affected side**, and the **eye can be seen to roll upwards** when the patient attempts to close the eye on the affected side (Bell's phenomenon). The **forehead** of patients with Bell's Palsy may be **abnormally smooth**. d) iii)

Bleb

A fluid filled **skin blister**.
d) e) g) i) j) iii) iv)

Blepharoptosis

Drooping of the upper eyelid.
b) d) ii) iii)

Boil (see furuncle)

Buerger's Disease

A rare disease affecting mostly men of 20 to 40 years causing progressive obliteration of arteries starting in the **feet** and progressing to involve **legs**. The skin is cold and shows poor healing characteristics. Patient may show signs of **ulceration on feet and toes** which may lead to **gangrene**. This disease, which is thought to be associated with heavy cigarette smoking, does not normally involve hands or arms. g) i) j) iii) iv)

Carbuncle

A deep-seated **abscess** with **multiple heads**.
d) e) f) g) i) j) iii) iv)

Candidiasis

Caused by *Candida albicans* or *Candida tropicalis*. Affects **mucous membranes** and **skin**. *Candida stellatoidea* causes vaginitis. Patients present with **scaly erythematous papular rash** with **exudate**. In the **mouth** and **vagina**, candida gives rise to **pseudomembranous white patches**. If involving **nails** candida causes paronychia, **nails are dark with swollen nail bed** and sometimes there is evidence of **pus**.
e) g) h) j) k) ii) iii) D)

Cheiropompholx

A disease featuring **vesicles on palms and soles**. g) j) iii) iv)

Coeliac disease

A condition of early childhood with steatorrhoea (undigested fat in the **stool**), a **distended abdomen** and failure to grow. E) f) j) ii) iv) A) D)

Cohen Syndrome

Essential features are progressive myopia and retinochoroidal dystrophy with early **lens opacity** and pale **fundus** and **disc**, and **narrow vessels**.
a) c) iv)

Condyloma

A **wart-like growth** of secondary syphilis at the junction of skin and mucous membrane (anus, **vagina**). **Discharge** is highly infectious.
J) ii) D)

Cretinism

Caused by low level of thyroid hormone in infant. Baby has **short forehead**, **wrinkled eyelids**, **wide spaced eyes**, and **mottled skin**. The **head appears big** for the body and the child has a **dull expression**. IQ is very low.
d) f) iii)

Chloasma

A condition presenting with **brown, blotchy discolouration of facial skin**, especially during pregnancy. d) iii)

Cleft palate (& Lip)

A congenital (midline) defect of the **roof of the mouth** often involving the **upper lip**. Cleft lip can occur without involvement of the palate. (No longer called 'Hare Lip'). d) h) j) ii) iii)

Clubbing (Fingers and toes)

see also Talipes
Broadening and thickening of fingers and toes due to poor circulation or contraction of muscles and tendons. g) iii)

Cri du Chat Syndrome

Congenital condition with severe mental and physical retardation. Baby has **wide set eyes, microcephally (small head) receding chin**, due to **small lower jaw, high palate, round face, low set ears**. **Simian crease** is evident (a single crease across palms). d) h) g) ii) iii) iv)

Cushing's Syndrome

A hormonal disorder due to over-production of ACTH (Adreno Cortico Tropic Hormone). Symptoms include **upper body obesity** and **slender limbs**. There are **fatty pads over clavicles** and the **upper back** giving rise to '**buffalo humps**'. The **face** is round with fat around the neck. Abnormal distribution of **hair** and **atrophy of genitals** are common. **Purplish pink stretch marks** appear on the **skin**. d) e) f) i) iii)

Cyanosis

A **bluish appearance** of the **skin** and **mucous membranes** due to an excessive amount of reduced haemoglobin. d) e) f) h) i) ii) iii)

Dactylitis

Inflammation of fingers or toes. g) iii)

Decubitus ulcer (pressure or bed sore)

A **wound** caused by constant pressure which reduces blood supply, usually affecting areas over a bony prominence: **buttocks, hips, elbows, heels** or **sacral area**, are often affected but any area can be effected. e) f) g) j) ii) iii)

Dermatophytosis

This condition causes **patchy hair loss** with **scaling, papules** may be present and these may become infected and **pus filled**. Lesions show up better with a Wood's light. d) e) f) iii) C) D)

Distichiasis

A **double row of eyelashes** which can irritate the eye. b) ii)

Dolichocephaly

An unusually **long head shape**. d) iii)

Down's Syndrome See Trisomy 21

Dupuytren's contracture

Contracture of the palmar fascia causing **permanent bending of finger(s)**. g) iii)

Ecchymosis

An effusion of blood under the **skin** causing **discolouration**, often follows trauma, e.g. a 'black eye'. Medical and forensic photographers will encounter this condition in assault cases.

b) d) e) f) g) i) j) ii) iii)

Ecthyma

An inflammatory condition of the **skin** with **eruption of large flat pustules** which **ulcerate and become hard and crusted**. They heal to leave a **pigmented scar**. d) e) f) g) i) j) iii) iv)

Elephantiasis

Thickening and swelling of skin and **subcutaneous tissues** due to lymphatic obstruction. Usually affects **lower limbs**, and may involve the **scrotum**. Elephantiasis is not a disease per se, but a symptom of a disease. A common cause in the tropics is *Wucheria bancrofti*. The organisms of which block lymph nodes. Congenital Elephantiasis is very rare and due to absence of lymphatic vessels. d) e) f) g) i) j) iii) iv)

Encanthis

Fleshy **growth at inner canthus**. b) i)

Epidermophyton

A type of 'ringworm' (tinea) which affects **nails** and **surrounding skin**, but not hair. *Epidermophyton* is of the genera which includes Trichophyton, and Microsporum which affect hair but not nails. Organisms fluoresce under a Wood's Light. d) e) f) g) i) j) iii) C)

Epiphora

Persistent overflow of **tears down face**. b) ii) iii) iv)

Epispadis

A defect in development which results in the **misplacement of the urinary meatus**. e) j) iii)

Erysipelas

A disease caused by streptococcus pyogenes which causes spreading **inflammation of skin**. There is also **swelling** and sometimes **vesicular eruptions**. Common on the **face and legs**, rarely in this disease **mucous membranes** may be involved. There are normally **sharp, clearly defined margins**. d) e) f) i) j) h) ii) iii)

Erythema Induratum

Occurs on the **calves** of women and presents as **bluish red plaques** which may **ulcerate**. Tuberculous in origin. i) iii)

Erythrasma

Bacterial skin infection which gives rise to **scaling macerations** and **fissuring of toe webs**. **Pink circumscribed plaques** may be evident and these may turn **brown**. g) j) ii) iii)

Erythroedema polyneuritis
(Infantile acrodynia) Rare. Features **redness** and **swelling** of **hands, feet** and **face**.
Warning: Patient will be photophobic. d) g) ii) iii)

Exfoliative Dermatitis
This disease is usually caused by a reaction to some form of chemical agent, often one which has been given as a drug. The patient sheds large amounts of **superficial skin** which comes off in **sheets**. Patient may suffer a **secondary infection** and occasionally display **oedema**. In severe cases **hair follicles** and sweat glands may be destroyed.
d) e) f) i) j) iii)

Eye diseases
Retinal and **external eye** diseases can be photographed using specialist optical equipment and techniques. External eye diseases include: conjunctivitis, iris tumours and naevi, ptosis, pterygium and ectropion. Retinal diseases include: macular degeneration, tumours and naevi, coloboma, vessel occlusion and haemorrhage. a) b) c) i)

Fistula
An **abnormal passage** communicating between one organ and another or to an internal or **external body surface** and appearing, when visible, as an **opening**. May be associated with **cleft palate** repair.
d) e) h) j) k) ii) iii)

Fragile X Syndrome
Most patients with this condition are male and have some degree of mental sub-normality. Typically patients have a **long face**, **prominent ears**, a **highly arched hard palate** and **flat feet**. **Testicles are grossly enlarged** even in patients under six months old.
d) e) g) h) ii) iii)

Furuncle
Localised inflammation of the **skin**, involving a hair follicle, only one 'head'. d) e) j) iii)

Gait
The manner of **walking**. A range of normal and abnormal gaits can be photographed using sequential images or recorded with motion picture equipment. f) i) iii)

Gigantism
Hyperpituitarism occurring before epiphyseal plates have fused gives rise to abnormal skeletal growth. Patient has abnormally tall **stature**.
f) A) iii) See also Acromegally

Gangrene
Death of tissue. **Affected area** is painful, **pale** and later becomes **discoloured** and **black**.

d) e) f) g) I) j) ii) iii)
Glossitis
Inflammation of the **tongue**. h) ii)

Gout
A metabolic disorder which results in excess uric acid which is deposited as urates in soft tissues, often in the vicinity of joints. The **great toe** is most often affected and this becomes **inflamed, swollen** and exquisitely painful. **Chalky deposits** may also be deposited in other areas, the **cartilage of the ear** is a common site. d) g) i) j) ii) iii)

Granuloma Annulare
A connective tissue disease which gives rise to patches of **small, red, firm nodules** on the **hands** and **feet**. g) iii) iv)

Grave's Disease
See Thyrotoxicosis

Gynaecomastia
Excessive growth of **male breast**.
e) j) iii)

Haematoma
A **swelling** containing blood. Can be photographed if affecting an **external body surface**.
d) e) f) g) i) j) iii)

Haemochromatosis
A disease giving rise to iron deposits in the skin, patient may present with a **bronze or grey tinged skin**.
d) e) f) g) i) iii)

Haemorrhoids
Locally **dilated rectal veins** which can be external to the **anal sphinctre**, 'piles'. e) j) iii)

Henoch - Schonlein Purpura
Destruction of arterioles by the products of infection causes patients to have a **purple macular rash**, echymotic (bean shaped) and varying in size. Scattered **pettechiae** are to be found over **legs, buttocks** and **pereneum**.
e) i) j) iii)

Hereditary Haemorrhagic Telangiectasis
A condition which gives rise to localized aggregation of **capillaries** on **face, ears** and **scalp**, also **arms** and **feet**. The **hands** are also affected and **capillaries** may be visible **under nails**. May also occur in **mucous membranes** of **mouth** and **nose**.
d) g) h) j) k) ii) iii)

Hernia
A protrusion of any part of an internal organ through covering structures. This may be visible as a **surface swelling**. e) j) iii) iv)

Herpes simplex

Small **vesicles around the mouth**. Caused by a virus. d) j) iii) iv)

Herpes genitalis

Small **vesicles** affecting the **external genitals**. Caused by a virus. e) j) iii)

Herpes Zoster (Shingles)

Caused by the same virus as Chicken-pox, which appears to lay dormant only to reappear as Shingles in adult life. Condition starts with swelling of lymph nodes and erythema. When the disease becomes fully established **vesicular eruptions** break out following the paths of nerves. **Lesions** may become infected and lead to permanent **scarring**. Shingles may involve the eye and lead to blindness. e) j) iii)
Hodgkin's Disease
A neoplastic disorder of which the visible sign is the **swelling of cervical lymph nodes**. Other **lymph nodes** may be involved. e) j) iii)

Horner's Syndrome

Nervous system damage affecting smooth muscle fibres, gives rise to **constricted pupil on affected side plus partial ptosis**. Patients often **sweat on the affected side of the face**. b) d) e) i) iii)

Hurler's Syndrome

A genetic condition which produces **bony deformities**. Main sign is **kyphosis**. In some patients the **corneas appear cloudy**. Mental deficiency is sometimes present. b) c) d) e) g) i) j) ii) iii)

Hydrocephalus

Congenital or acquired **enlargement of the skull** due to interference with the circulation of Cerebro Spinal Fluid. This condition does not occur once the skull fontanelles have fused, when the brain is rapidly compressed if CSF does not drain naturally. d) iii)

Hyperlipidemia

A lipid metabolism disease which causes Xanthomata (**new flat growths from pinhead size to pea size**) on **eyelids, palmar creases** and **creases on sides of neck**. Sometimes **eruption of yellow papules over large areas of body** appear. It may be associated with diabetes mellitus. b) d) e) g) i) j) iii) iv)

Hypopituitarism

In children an under-functioning pituitary gland can give rise to Frohlich's Syndrome in which the child is **fat**, with **retarded growth, small genitals** and **severe mental subnormality** or Lorain's Syndrome in which intelligence is normal but child is **tiny** with perfect proportions but with **small genitalia**. e) f) j) iii)

In adults hypopituitarism causes Simmond's Disease. This is sometimes due to haemorrhage brought on by parturition. Patients suffer **areas of depigmentation**, are **wasted and pale** and may show signs of **secondary myxoedema**. e) f) iii)

Hypospadias

'Midline defect' which results in misplaced urinary meatus. In males the urinary meatus is on the **underside of the penis**. In females it is **in the vagina**. e) j) ii) iii)

Hypothyroidism

Low level of thyroid hormone, (Tri Iodothyronine). Patient presents with **weight gain, dry flaky skin, puffy face, hands and feet, preorbital oedema, upper eyelid droop, thick nails** and poor peripheral circulation. Patients appear mentally slow. b) d) e) f) g) ii) iii)

Ichthyosis

Congenital abnormality of the **skin** featuring **thickening, roughness, dryness, and large scales**. Excess and dermatitis can follow in later life. e) f) j) iii)

Intersusception

This condition is more common under the age of two (70% cases), more girls than boys affected. Small bowel 'swallows itself'. The **stools** resemble Red Current Jelly. j) iii) D)

Iron Deficiency Anaemia

A condition caused by haemorrhage, dietary deficiency or impaired absorption. In addition to the usual symptoms of anaemia the patient may have **brittle spoon shaped nails** (koilonychia). g) j) iii)

Jaundice

A **yellow discoloration of the skin** due to Bile pigment in the blood. d) e) f) i) iii)

Kaposi's sarcoma

Found in patients suffering from the terminal stages of Acquired Immune Deficiency Syndrome and caused by the type 8 Herpes virus. Usually manifest itself on **skin** but can involve the lungs. The patient presents with **multiple haemorrhagic nodules and plaques**. Disease may obstruct lymph vessels leading to **oedema**. e) f) j) iii) iv)

Kayser-Fleischner ring

A **brownish pigmented ring** seen in the **cornea**. See 'Wilson's' disease. b) c) ii)

Keloid

A **hard tumour** of the **skin** due to overgrowth of fibrous tissue from wound healing. Presents as a raised scar. Can affect all races but more common in those of Negroid or Chinese origin.

d) e) g) j) iii) iv)

Keratosis (Hyper keratosis)

A disease of the skin featuring **excessive growth of epidermis** (horny layer). Partly due to excessive exposure to sunlight, more common in those who have been in tropical areas. d) e) f) g) j) iii) iv)

Klinefelter's Syndrome

Affects only males, caused by multiple X chromosomes. Patients are infertile, with **sparse facial hair**. There is usually a female **distribution of pubic hair** and a **very small penis with long legs and short trunk** and more than 50% present with **gynaecomastia**.

d) e) f) j) iii)

Klippel-Feil Syndrome

Congenitally **shortened neck** due to absence or fusing of cervical vertebrae. d) e) iii)

Koplik's Spots

An early sign of Measles, **small red spots with white centres** which occur on the **inner aspects of the cheeks (buccal mucosa)**.

h) j) k) ii)

Kyphosis

Posterior **curvature** of the **spine; hump back**.

e) f) iii) iv)

Lead poisoning

Occurs near smelters, may also occur where children live in old houses and eat lead paint picked from furniture and fittings. Leaded petrol is also a source of Tetraethyl lead. Patients sometimes present with a **stippled blue line on the gum margin** which is found in association with **gingivitis**. h) k) ii)

Leprosy (Hanson's Disease)

An infectious disease which affects **skin** and nerves, mainly affected are **hands, feet, and face**. There are two main types of the disease, 'Wet' & 'Dry'. Any part of the body can be affected. d) e) f) g) j) iii)

Leukoplakia

A condition of squamous cell epithelium which gives rise to the formation of **raised white plaques**. Common sites are the **mouth** and the **vulva**.

e) h) j) k) ii) iii)

Lichen Planus

A skin condition which is only found in adults. It gives rise to **small papules with a flat**

shiny surface which may have a **tinge of pink or violet**. Papules may be limited in distribution but may be profuse. Typically found on **wrists** or **forearms, inside mouth** and on **genitalia**. **Larger lesions often criss crossed by fine lines** (Wickham's striae).

e) g) h) i) j) k) ii) iii)

Lithiasis

Small white **chalky deposits**, calculi, form on the **underside of the eyelid**, Conjunctival lithiasis. Eyelid is inverted for photography.

b) i)

Little's Disease

Spastic diplegia. A congenital **muscular rigidity** of the **lower limbs** (Scissor legs).

f) I) iii)

Lupus

A **skin** disease with several manifestations ranging from urticaria to hyperkeratosis.

d) e) f) g) i) j) iii) A)

Malignant melanoma

A particularly dangerous type of **skin** cancer.

d) e) f) g) i) j) iii) A)

Marfan's Syndrome

An hereditary disorder of the connective tissue which causes heart, **eye**, renal and skeletal problems. Patient presents with **excessively long legs and arms, span across outstretched arms exceeds height. Long slender fingers, also chest deformities**.

Occasional **scoliosis**, 75% patients have **crystalline lens** displacement.

c) f) g) i) ii) iii)

Macro...

cephalus - abnormally **large head**

d) iii)

glossia - abnormally **large tongue** d) h)

ii) iii)

mastia - abnormally **large breast size** e)

iii)

ophthalmos - congenital condition giving rise to abnormally **large eyes**. b) d) ii) iii)

scopic - discernable with the naked eye.

stomia - abnormal development of mouth

where maxillary and mandibular processes do not fuse. d) h) ii) iii)

Masatrophia

Atrophy of **breast**. e) iii)

Mastectomy

Amputation of breast. e) iii)

Mastitis

Inflammation of breast. e) iii)

Microcephally

Abnormally **small head**, often associated with mental subnormality. d) iii)

Melanoderma

Patchy **pigmentation** of **skin**, usually involving **face** or **neck**. d) e) iii)

Melanoma

Brown **pigmentation** of **skin** such as birthmark or tumour.

d) e) f)) i) j) iii) iv) A)

Microthalamos

Abnormally **small eye** which may not be impaired. b) d) ii) iii)

Mobius Disease

'Dead face syndrome'. A condition in which the patient presents with **facial paralysis**, and an **inability to fully abduct eyes beyond mid point**. **Tongue** may show signs of **atrophy**. d) h) ii) iii) B)

Moeller-Hunter Syndrome

Patient presents with a very sore **tongue** the sides of which displays **brilliant red patches**. h) i) k) ii)

Mouth

Intra-oral and extra-oral views are common for diseases of the **gingiva, teeth, tongue** and **buccal mucosa**.

k) ii)

Mumps (Epidemic parotitis)

Usually a trivial disease in children producing **swelling** of one or more **salivary gland**.

After puberty the disease is more serious and can produce inflammation of the gonads, pancreatitis and encephalitis. Most common complication is orchitis.

d) e) j) iii)

Myxoedema

A condition caused by under-activity of the thyroid gland. More common in women.

Patient has **pale face, puffy around the eyes**.

Body weight is increased, **hair loss** is evident and usually affects **eyebrows** as well as

capital hair. d) e) j) iii)

Nephrotic Syndrome

A condition in which excessive loss of protein in urine causes oedema. Patient presents with **oedematous ankles** and **face**. Fluid retained by peritoneum produces a **grossly swollen abdomen**.

d) e) g) i) iii) D)

Neurofibromatosis

(Von Recklinghausen's Disease)

Marked overgrowth of ectodermal and mesodermal elements of **skin** and other organs including the fibrous connective tissue supporting the nerves giving rise to

neurofibromas. Any nerve can be affected giving rise to a **single tumour, or multiple tumours** if several nerves are affected causing the patient to become hideously deformed.

(Von Reckling-husen's Disease) John

Merrick 'The Elephant Man' is the most famous example of this condition. Patients may also show **flat lesions with café au lait spots**. **Scoliosis** may be present. d) e) f) iii) iv)

Non Hodgkins Lymphoma

Malignant lymphoma, more common in males. In children it has twice the death rate of Hodgkins Disease. **Enlarged tonsils** and **adenoids, cervical lymph nodes** are rubbery and other **lymph nodes** may show signs of **swelling**. e) h) j) ii) iii) iv)

Obesity

Excessive development of fat throughout the **body**, morbid obesity is life threatening. e) f) iii)

Oedema

An **effusion** of fluid into tissue. A **depression** is caused when pressed which regains slowly its original contours. j) iv)

Omphalitis

Inflammation of the **umbilicus**.

e) j) ii) iii) iv)

Onychia

Inflammation of the matrix of the **nail** which may cause the nail to fall off. g) j) ii) iii)

Paget's Disease of bone (Osteodeformans)

A bone disease more common in men than women, usually starting in middle age and which involves unusual absorption and replacement of bone. New bone is chaotic and the patient suffers **deformities** which may affect **torso** plus other places. **Sacrum, pelvis, spine, femur, clavicles, humerous, and ribs** can be affected. **Skull is enlarged** with extra **bony growth to occipital area** and **frontal areas**. **Chest** may become **barrel shaped**. Hands and feet are not usually affected. d) e) iii)

Paget's Disease of breast

A cancer of the breast involving only the **nipple**. e) j) iii) iv)

Panniculitis

A condition in which **multiple nodules** appear in the **skin**. **Nodules** or **plaques** are **raised** and **red** and **may drain oily secretions onto skin surface**. d) e) f) j) iii) iv) D)

Pemphigus

A disease which causes **bullae** (Large blisters) to form on **skin**, but without surrounding redness. **Blisters** break and become infected.

d) e) f) g) i) j) iii) iv)

Pernicious Anaemia

A disease which usually starts in middle age due to failure to produce Castle's Intrinsic Factor in stomach. Vit. B 12 is not absorbed leading to anaemia. Patient has **lemon yellow tinge** and 50 % have a **smooth red raw-looking tongue**.

d) e) f) h) j) ii) iii)

Phallitis

Inflammation of the **penis**. e) j) ii) iii)

Pilonidal Disease

More common in Caucasian men 18 – 30 years. A hair grows into the tissues and presents as a **hard, painful lump** which may become infected and produce foul smelling pus. Often affects **groin** and **buttock** area and is less common in those who bathe rather than shower. Soaking in the bath seems to prevent this condition.

d) e) j) iii) iv) D)

Pilosis

Abnormal growth of **hair**. d) e) f) g) i) j) ii) iii)

Pityriasis Rosea

A viral infection which starts with one small patch about 2.5 centimetres. A **ring of scales forms inside circumference of patch**. More patches develop mainly on **trunk**. Patches are **slightly oval** and line up with **ribs**. e) j) iii)

Podopompholyx

Excema on **skin** between toes. g) j) ii) iii)

Polydactylism

Having more than the normal numbers of **fingers** and **toes**. g) j) ii) iii)

Porphyria

Porphyrins are associated with respiratory pigments in plants, insects and mammals. In combination with iron they are a constituent of haemoglobin. If the mechanism for breaking down haemoglobin released from red blood cells destroyed by the reticulo- endothelial system is defective, porphyria will result. In children it is more common in males and is inherited as a recessive gene. Bones become brown due to porphorin deposits and **teeth appear lavender** and **fluoresce red under UV light**. Patients present with **erythema** and **altered skin pigmentation**, and may have **white papules on the dorsal aspects of their hands**. They may also have **excessive hair on upper cheeks** and **preorbital areas**. **Urine** has **classic port wine colour**.

d) e) f) g) j) k) iii) D)

Another type of Porphyria exists in which the patient develops a sensitive, **jaundiced skin**,

sunlight and heat causes **blisters**

(Cutaneohepatic Porphyria).

Acute porphyria occurs in the patient's third decade, and attacks may be precipitated by certain drugs. Urine turns port wine colour on standing. Hallucinations may occur in these patients. D)

Psoriasis

A skin disorder that causes **red spots, covered with thick scales**. Scraping off scales reveals a **silvery area**, further scraping causes bleeding. **Nails may be thick and pitted**. **Lesions** commonly seen on **knees and elbows**, but can be any-where including **scalp**. **Palms** and **soles of feet** may be **keratinized**.

d) e) f) g) i) j) iii) iv)

Pupura

Purple spots and patches on **skin** caused by extravasation of blood in skin and **mucous membranes**.

d) e) f) g) h) i) j) iii)

Querat's Erythroplasia

A malignant condition of the **penis** which presents as **red, flat, crusting patches** on the **prepuce** and **glans**. e) j) iii)

Quinine toxicity (cinchonism)

(Chinchona – Peruvian bark from which quinine is obtained) Poisonous effects can lead to blindness and deafness. **Retinal damage** features **discolouration** (greyiness). a)

Reiter's Syndrome

Thought to be a type of sexually transmitted disease, Reiter's Syndrome is rare in women. Patient is usually male 20-40 years. It is an arthritic condition, which starts with **swelling and reddening of urinary meatus**. **Mucopurulent discharge** made be evident. **Psoriasis like lesion** may be present on **palms** and **soles of feet**, **nails** may be **thick and opaque**. Some patients have **painless ulceration in the mouth** and **Conjunctivitis**. b) e) g) h) j) k) ii) iii) D)

Respiratory distress syndrome

Occurs in premature babies between birth and day three, features severe retraction of **chest wall** and **cyanosis**. Surface tension of water in babies' lungs causes alveoli to collapse because 'Surfactant', a natural detergent found in the lung, is absent. e) f) iii)

Retinal Disease (See Eye diseases)

Roseola

A rose coloured **skin rash** *R. Infantum* is an acute disease of infancy in which a high temperature drops prior to the appearance of the **rash**. e) f) j) iii)

Rickets

Seen in children who have vitamin D deficiency. Child has **enlarged wrists** and **ankles**, a **bulging forehead** and **bowed legs**. **Pigeon chest** is common and patient may present with '**rachitic rosary**', (Knobs forming on ribs where they access the sternum. d) e) f) g) i) iii)

Rosacea

More common in middle-aged women this condition causes permanent dilation of capillaries. Telangiectases (dilated capillaries which give rise to **raised red wart-like lesions**) may form. Patient has **areas of redness on cheeks and forehead**. d) j) iii)

Sarcoidosis

Approximately 25 % of those with this disease have **skin manifestations**. These include Erythema Nodosum which usually presents as **raised red nodules or plaques** on the **anterior surface of the legs**. e) f) g) j) iii)

Scald

A burn to the **skin** or **mucous membranes** caused by hot liquid or vapour. Any skin surface can be affected but it is common on buttocks and abdomens of abused children. d) e) f) g) h) i) j) k) ii) iii) A)

Scabies

Caused by mites that live in skin, emerging at night to breed. **Lesions** common **between fingers, flexor surface of wrists, elbows, nipples in females** and **genitalia in males**. Mites live in clothes and are transferred by sharing. Also spread by intimate contact. In old or debilitated patients the **whole body may be infected**. Such patients have **skin** which appears as rough grey stone. Because of itching, **lesions** may become excoriated and secondary infection may occur. e) f) g) i) j) iii)

Scaphocephaly

An abnormal boat shaped **head** due to premature closure of sagittal sutures of skull. d) iii)

Scleroderma

A condition in which the **skin** becomes **hard and stiff**. At first it becomes thickened but as the disease progresses it atrophies and shows multiple **telangiectases** (capillaries which grow and form small red button-like **protrusions**). Patient may present with **blanching** and **cyanosis of fingers and toes**. **Fingers may swell** and become **sausage-like** with taught **skin**, contractures may develop. **Skin over face** may also be **taught**. **Fingers may be short** due to absorption of bone in terminal phalanges, **ulcers** or **gangrene** may affect **fingers** and **toes**. d) f) g) j) iii)

Scoliosis

Abnormal curvature of **spine**, mostly lateral deviation which alters with posture. Patient is photographed posteriorly, upright and bending forward. f) iii) A)

Spina bifida

A congenital (mid-line) defect which allows protrusion of meninges (covering of brain and spinal cord) and their contents and may appear as **swelling in middle of back**. A **tuft of hair** may grow over the site. e) f) j) iii)

Stein-Leventhal syndrome

A condition affecting females characterised by **obesity** and **hirsutism**. e) f) iii)

Stigma

Any **haemorrhage, spot, mark**, or **peculiarity** related to disease on the **skin** of a patient. The term 'stigma' refers to visible signs rather than symptoms. d) e) f) g) i) j) iii)

Stevens-Johnson Syndrome

A disease which gives rise to a **rash** which eventually spreads over **all of the body**, the **genitalia** are usually badly affected and the patient may have **mouth ulcers**. The **rash** may involve the **eye** which may lead to **scarring** and blindness. b) d) e) f) g) h) i) j) k) iii)

Strabismus

A fixed deviation of either **eye**. Shown in photographs using a nine-picture set of primary, secondary and tertiary **positions of gaze**. b) ii) B)

Sturge-Weber syndrome

A congenital condition where there is a **port wine stain** apparent on the **face**. d) j) iii)

Syndactylism

Webbed fingers or **toes**. g) j) ii)

Syndromes

There are many syndromes and deformities, especially in paediatrics, which are not listed here. Some, such as Spengel's shoulder deformity - a condition where one scapula is higher than the other, Werner's syndrome - a hereditary condition featuring cataracts, osteoporosis, stunted growth and premature greying hair - are too specific for all to be included in this list.

Systemic lupus erythematosus

This disease is more common in women, 90 % of cases are women 30 to 50 years old (lupus is Latin for wolf), patients have **butterfly-shaped rash** on their **face** (said to give a wolf-like appearance). **Rash** is **purplish red** and

slightly raised. Rashes may also occur on the **body**, and **joints** may show **redness**. Patient may also suffer **patchy alopecia**. d) e) f) g) i) j) iii) iv)

Sunburn
A dermatitis due to exposure of the **skin** to sun's rays (UV light) causing burning and **redness**.
d) e) f) g) i) j) ii) iii)

Sweet's Syndrome
A disease which sometimes follows a respiratory tract infection and is more prevalent in females. The patient presents with **red-brown nodules** and **plaques** which are mostly on the **head and neck**. d) e) j) iii)

Thalassemia Major
A genetic form of anaemia seen mostly in Southern Europeans but occasionally others. This condition is usually diagnosed early in life. The infant has a '**Mongoloid**' appearance (Simian crease not evident), is **small**, appears **pale** (anaemic), and shows signs of **jaundice**. When photographing jaundiced patients the inside of the mouth and the eyes are often a good site to show dis-colouration. Infants with Thalassemia Major have an **enlarged spleen**.
a) b) d) e) g) h) ii) iii) iv)

Talipes
Deformity caused by congenital or acquired contraction of muscles or tendons of the **foot**.
g) iii)

Tumour
A swelling due to morbid **growth of tissue** not due to inflammation, often involving the **skin** but can involve **other parts of the body**.
a) b) c) d) e) f) g) h) i) j) k) ii) iii) A)

Thyrotoxicosis (Grave's Disease)
Caused by over-activity of the thyroid gland. Patient's **eyes may protrude** (exophthalmos) **pupils are dilated, upper lid lags behind eye when patient looks down**, the patient may have **difficulty looking up** without tilting their head. Eyelids are often pigmented, and pigmentation may involve the **entire body**. Patient is **usually thin** and has an obviously **enlarged thyroid** gland (goitre). The disease is more common in women under the age of 40.
b) d) e) f) j) ii) iii)

Trisomy 21 (Downs Syndrome)
Was called 'Mongolism', now known as 'Downs Syndrome'. Patient has slanted almond shaped **eyes**, **nose bridge** is flat, small rather low set **ears** and a small **mouth** which makes the tongue seem large. **Fingers** are short and stubby. **Palms** may have 'Simian Crease'. '**Brushfield spots**' may be present on **iris**. b) d) g) j) ii) iii)

Tylosis
Formation of hard **patches** of **skin**, callosity.
d) e) f) g) i) iii) iv) A)

Ulcer
A **break in skin or mucous membrane** often with **suppuration**.
d) e) f) g) h) I) j) ii) iii) iv)

Urticaria
Episodic disease which gives rise to **dermal wheals** surrounded by erythematous flare. **Lesions** are usual small, less than 2cm across but may cover an entire body part.
d) e) f) g) i) j) iii)

Varicose veins
Dilated and twisted condition of **veins** usually on **leg**. i) j) iii) iv)

Vulvitis
Inflammation of the **vulva**. e) j) ii)

Varicella (Chicken-pox)
A viral infection causing **rash on trunk** and **scalp**, rash develops into **papules** which become **vesicles** the contents of which becomes cloudy. Vesicles form **scabs**. **Rash** spreads to **face**. d) e) iii) iv)

Vitiligo
Depigmentation of patches of **skin** due to lack of melanocytes, usually bilateral in distribution and symmetrical with distinct borders. **Lesions** often occur over bony prominences. **Face** and **backs of hands** often affected. UV light shows up lesions with greater intensity, a 'Woods light' is useful.
d) g) iii) iv) C)

Warning: Exposure to certain chemicals can destroy melanocytes, hydroquinone is an example so photographers are at risk!

Wart
An elevated area of **skin** usually brownish in colour often rough.
d) e) f) g) i) j) iii) iv) A)

Weal
Raised stripe of **skin**, typical of urticaria.
d) e) f) g) i) j) iii) iv)

Wegener's granulomatosis
A disease which affects the upper respiratory tract but in which approximately half of the victims exhibit **skin lesions** which include **papules, vesicles, ulcers, and purpura**. The renal system is also often involved. d) e) f) g) i) j) iii) iv)

Whipple's disease
A disease of the gut thought to be caused by an unknown organism. Patient displays **weight loss** and **hyper-pigmentation**. f) iii)

Wilson's disease

An autosomal recessive trait, if both parents are carriers offspring have 25% chance of inheriting disease, 50% will be carriers. More common in Southern Italians and Eastern European Jews. Patient presents with Kayser-Fleischer Ring, a **rust coloured ring around cornea**. b) c) i)

Xanthelasma

A disease marked by slightly **raised yellow patches** on the **eyelids**. The condition is related to Hyperlipodaemia. b) i)

Xanthosis

A **yellowing** of the **skin** found in some cancers. d) e) f) g) i) j) iii)

Xeroderma pigmentosum

An autosomal recessive disease which causes sensitivity to UV light. Patients present with **patchy pigmentation, scaling, erythema on exposed areas of skin**. **Warty growths** may also be present and these are pre-malignant. d) e) f) g) i) j) iii) iv)

Yaws

Caused by spirchaete Treponema pertenuae, an organism similar to Treponema pallidum which causes syphilis. Yaws is present in several parts of the world and is well-known in the Philippines. The patient has a positive Wassermann reaction but Yaws is not a sexually transmitted disease. The organism enters the patient via pre-existing lesion, often on the legs, fomites and vectors such as tropical grasses and insects spread it from one victim to the next. Presents as a **granulomatous cutaneous lesion**. In the secondary phase patient develops generalized **papilomas**. f) g) i) j) iii)

Zieve's Syndrome

A condition seen in alcoholics who present with **jaundice** after a drinking binge. d) e) f) iii)

Zoster myelitis

This is an uncommon complication of 'Shingles' (Herpes Zoster), and is a variety of the Brown - Sequard Syndrome. Patient has **paralysis and muscle wasting on one side** of the **body** and loss of sensation on the other. e) f) iii)