Fingernail abnormality

Classify fingernail changes by 'naming' them first. Some have few causes and are good diagnostic leads.

Classification	
Clubbing **due to many causes (see ➔ Clubbing, p.66)**	*Confirmed by:* angle lost between nail and finger (no gap when nails of same finger on both hands apposed, bogginess of nail bed, increased nail curvature, both longitudinally and transversely, and drumstick finger appearance).
Terry's lines **due to many causes (see ➔ Terry's lines: dark pink or brown bands on nails, p.68)**	*Confirmed by:* nail tips having dark pink or brown bands.
Nail fold infarcts **due to vasculitis due to many causes (see ➔ Vasculitic nodules on fingers, p.69)**	*Confirmed by:* dark blue-black areas in nail fold.
Koilonychia **due to iron deficiency anaemia (occasionally ischaemic heart disease or syphilis)**	*Suggested by:* spoon-shaped nails. *Confirmed by:* ↓Hb, ↓ferritin from iron deficiency (basal or exercise **ECG** for ischaemic heart disease; **serology** for syphilis).
Onycholysis **due to psoriasis, hyperthyroidism**	*Suggested by:* nail thickened, dystrophic, and separated from the nail bed. *Confirmed by:* clinical appearance and evidence of cause, e.g. skin changes of psoriasis or **↑FT4** ± **↑FT3** and **↓TSH.**
Beau's lines **due to any period of severe illness**	*Suggested by:* transverse furrows. *Confirmed by:* history of associated condition.
Longitudinal lines **due to lichen planus, alopecia areata, Darier's disease**	*Suggested by:* transverse furrows (ending in triangular nicks and nail dystrophy in Darier's disease).
Onychomedesis **due to any period of severe illness**	*Suggested by:* shedding of nail. *Confirmed by:* history of associated condition.

Muehrcke's lines due to hypoalbuminaemia	*Suggested by:* paired, white, parallel, transverse bands. *Confirmed by:* serum albumin <20g/L.
Nail pitting due to psoriasis or alopecia areata	*Suggested by:* small holes in nail. *Confirmed by:* rash on extensor surfaces with silvery scales (psoriasis) or circumscribed areas of hair loss (alopecia areata).
Splinter haemorrhages due to infective endocarditis (sometimes due to manual labour)	*Suggested by:* fine, longitudinal, haemorrhagic streaks under the nail. *Confirmed by:* history of manual labour (or fever, changing heart murmurs, and bacterial growth on several **blood cultures**).
Chronic paronychia due to chronic infection of nail bed	*Suggested by:* red, swollen, and thickened skin in nail fold. *Confirmed by:* response to antibiotics (erythromycin for bacterial infection or nystatin for fungal infection).
Mees' lines due to arsenic poisoning or renal failure, Hodgkin's disease, heart failure	*Suggested by:* single, white, transverse bands. *Confirmed by:* presence of associated conditions.
'Yellow' nails due to lymphoedema, bronchiectasis, hypoalbuminaemia	*Suggested by:* colour! *Confirmed by:* presence of associated condition.

Clubbing

Present when the angle is lost between nail and finger (no gap when nails of same finger on each hand apposed). Initial investigations: FBC, ESR/CRP, CXR. Subsequent tests depend on other evidence below and the possibilities suggested.

Main differential diagnoses and typical outline evidence, etc.

Subacute bacterial endocarditis	*Suggested by:* general malaise, weight loss, pallor, low-grade fever, changing heart murmurs ± past medical history (PMH) of valve or congenital heart disease. **FBC**: ↓Hb, ↑WBC. ⇈**ESR**, ⇈**CRP**. *Confirmed by:* growth of organism, e.g. *Streptococcus viridians* after **serial blood cultures** ± endocardial vegetations on **transoesophageal echocardiography.** *Finalized by the predictable outcome of management, e.g.* treatment on high index of suspicion, hospital admission, avoidance of antibiotics before blood cultures, initial benzylpenicillin and gentamicin IV for 4wk with gentamicin levels.
Cyanotic congenital heart disease	*Suggested by:* long past history, central cyanosis. *Confirmed by:* **echocardiogram** appearances. *Finalized by the predictable outcome of management, e.g.* O_2 therapy, treatment of heart failure and infection, surgical intervention.
Bronchial carcinoma	*Suggested by:* malaise, increased cough, weight loss, haemoptysis. Smoking history. Opacity (suggestive of mass ± pneumonia ± effusion) on **CXR** and **CT scan**. *Confirmed by:* **bronchoscopy** appearances and histology. *Finalized by the predictable outcome of management, e.g.* control of pain and infection. Non-small cell tumours: excision, radiotherapy, or combined radiotherapy and chemotherapy depending on staging. Small cell tumours: chemotherapy or palliative radiotherapy.
Bronchiectasis	*Suggested by:* chronic cough, productive of copious purulent, often rusty-coloured sputum. *Confirmed by:* **CXR** and **CT scan**: thickened 'tram line' (dilated) bronchi. **Bronchoscopy** appearances. *Finalized by the predictable outcome of management, e.g.* postural drainage, antibiotics according to sputum culture and sensitivity, bronchodilators (e.g. nebulized salbutamol), steroids (e.g. prednisolone), surgerical removal of affected segments.
Lung abscess	*Suggested by:* cough, very ill, spiking fever, PMH of lung disease. *Confirmed by:* **CXR**: mass containing fluid level (air above pus). *Finalized by the predictable outcome of management, e.g.* antibiotics according to sputum culture and sensitivity for up to 6wk, aspiration, and antibiotic instillation, surgical excision.