Papulosquamous diseases are a group of disorders characterized by scaly papules and plaques. These entities have little in common except the clinical characteristics of their primary lesion.

Included in this category of diseases are seborrhea, psoriasis, pityriasis rosea, the superficial fungal infections, miliaria and lichen planus.

The lesions of psoriasis are distinctive. They begin as red, scaling papules that coalesce to form round-to-oval plaques, which can easily be distinguished from the surrounding normal skin. The scale is adherent, silvery white, and reveals bleeding points when removed (Auspitz's sign). Scale may become extremely dense, especially on the scalp. Scale forms but is macerated and dispersed in intertriginous areas; therefore the psoriatic plaques of skin folds appear only as smooth, red plaques with a macerated surface. The most common site for an intertriginous plaque is the intergluteal fold; this is referred to as gluteal pinking. The deep rich red color is another characteristic feature and remains constant in all areas. Environmental influences may modify the course, severity, and age of the individual at the time of the onset of the disease. Extent and severity of the disease vary widely. The disease affects the extensor more than the flexor surfaces and usually spares the palms, soles, and face. Most patients have chronic localized disease, but there are several other presentations. Localized plaques may be confused with eczema or seborrheic dermatitis, and the guttate form with many small lesions can resemble secondary syphilis or pityriasis rosea.

Lithium, Beta-blockers and anti-malarials may worsen psoriasis as does withdrawal of systemic steroids. Psoriasis frequently begins in childhood, when the first episode may be stimulated by streptococcal pharyngitis (as in guttate psoriasis).
Keratoderma blenorrhagicum (Reiter's syndrome).
Reiter's syndrome appears to be a reactive immune response that is usually triggered in a genetically susceptible individual (60% to 90% of patients are HLA-B27 positive) by any of several different infections, especially those that cause dysentery or urethritis. Patients with Reiter's syndrome (urethritis and/or cervicitis, peripheral arthritis of more than 1 month's duration) develop psoriasiform skin lesions usually 1 to 2 months after the onset of arthritis; 25% develop conjunctivitis.

Psoriasis of the nails. Nail changes are characteristic of psoriasis and can be present in the absence of skin changes. Nail pitting, as seen on the right, is the best known and possibly the most frequent psoriatic nail abnormality. Nail plate cells are shed in much the same way as psoriatic scale is shed, leaving a variable number of tiny, punched-out depressions on the nail plate surface. They emerge from under the cuticle and grow out with the nail. Many other cutaneous diseases may cause pitting (e.g., eczema, fungal infections, and alopecia areata). It may also occur as a normal variation.

Psoriatic arthritis is a distinct form of arthritis in which the rheumatoid factor is usually negative. It may occur at any point in the course of the disease. Psoriasis of the nail bed causes separation of the nail from the nail bed. The nail detaches in an irregular manner. The nail plate turns yellow, simulating a fungal infection. Subungal debris, which is analogous to fungal infection is not present. The nail bed scale is retained, forcing the distal nail to separate from the nail bed. The arthritis can occur in either a symmetric or asymmetric pattern and commonly involves the DIP and PIP joints. The most common pattern is an asymmetric arthritis involving one or more joints of the fingers and toes. The small joints of the hands and feet, wrists, ankles, knees, and elbows may be involved. Perhaps the most characteristic presentation of arthritis with psoriasis is the involvement of the DIP joints of the hands and feet with associated psoriatic nail disease. The disease is chronic but mild, is not disabling, and is responsible for approximately 5% of cases of psoriatic arthritis.

Chronic plaque psoriasis. Chronic, noninflammatory, well-defined plaques are the most common presentation of psoriasis. Lesions can appear anywhere on the cutaneous surface. They enlarge to a certain size and then tend to remain stable for months or years. A temporary brown, white, or red macule remains when the plaque subsides.
Patients with pityriasis rubra pilaris have red parafollicular papules with a slight scale which often affects the palms and soles.

**Perioral Dermatitis**
Perioral dermatitis is a distinctive eruption. It occurs in young women and resembles acne. Papules and pustules on an erythematous and sometimes scaling base are confined to the chin and nasolabial folds while sparing a clear zone around the vermillion border. Perioral dermatitis occurs in an area where drying agents are poorly tolerated; topical preparations such as benzoyl peroxide, tretinoin, and alcohol-based antibiotic lotions aggravate the eruption. The pathogenesis is unknown. Some have proposed that the dermatitis is a cutaneous intolerance reaction linked to constitutionally dry skin and often accompanied by a history of mild atopic dermatitis. It is precipitated by the habitual, regular, and abundant use of moisturizing creams. This results in persistent hydration of the horny layer, impairment of barrier function, and proliferation of the skin flora.

**Keratosis Pilaris**
Keratosis pilaris is a common finding on the posterolateral aspects of the upper arms and anterior thighs. The eruption is probably more common in atopics. Clinically, a group of small, pinpoint, follicular pustules remains in the same area for years. The inflammation actually occurs outside of the hair follicle. Scratching, wearing tight-fitting clothing, or undergoing treatment with abrasives may infect these sterile pustules and cause a diffuse eruption. Keratosis pilaris resists all types of treatment.

**Pseudofolliculitis Barbae (Razor Bumps)**
Pseudofolliculitis is a foreign body reaction to hair. Clinically, there is less inflammation than with staphylococcal folliculitis. The condition occurs on the cheeks and neck in individuals who are genetically inclined to have tightly curled, spiral hair, which can become ingrown. This condition is found in 50% to 75% of blacks and 3% to 5% of whites who shave. If cut below the surface by shaving, the sharp-tipped whisker may curve into the follicular wall or emerge and curve back to penetrate the skin. A tender, red papule or pustule occurs at the point of entry and remains until the hair is removed. Generally, the problem is more severe in the neck areas where hair follicles are more likely to be oriented at low angles to the skin surface, making repenetration of the skin more likely. Pseudofolliculitis can occur also in the axillae, pubic area, and legs. Normal bacterial flora may eventually be replaced by pathogenic organisms if the process becomes chronic.
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Superficial Fungal Infections

Common Dermatological Problems

Superficial Fungal Infections

Very common, especially in warm, moist areas of body; and warm moist climates.

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Superficial Fungal Infections

Dermatophytes

- Tinea Corporis
- T.Faciea
- T. Capitis
- Candidiasis
- Tinea Versicolor

Epidermal infections involve itching and burning
Dermal and fat infections usually involve pain and burning.
The superficial fungal infections caused by dermatophytes and yeast are common causes.

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Tinea Faciea

This woman had red, scaly patches and plaques on her face, and a KOH demonstrated numerous fungal hyphae.
Some authors maintain that fungal infection of the face should be treated with oral antifungals, and others maintain that topical antifungals are adequate. If there are any superimposed red papules or pustules within these red, scaly areas, that usually indicates a follicular infection, and oral agents are necessary to eradicate that.

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Tinea Pedis

The feet are the most common area infected by dermatophytes (tinea pedis, "athlete’s foot"). Shoes promote warmth and sweating, which encourage fungal growth. Fungal infections of the feet are common in adult males and uncommon in women. Tinea of the feet may present with the classic ‘ringworm’ pattern, but most infections are found in the toe webs or on the soles.

Chronic scaly infection of the plantar surface. Plantar hyperkeratotic or moccasin-type tinea pedis is a particularly chronic form of tinea. The entire sole is usually infected and covered with a fine, silvery white scale. The skin is pink, tender, and/or pruritic. The hands may be similarly infected. It is rare to see both palms and soles infected simultaneously; rather, the pattern is infection of two feet and one hand or of two hands and one foot. T. rubrum is the usual pathogen.
Tinea of the Groin

Tinea of the groin (tinea cruris, jock itch) occurs often in the summer months after sweating or wearing wet clothing and in the winter months after wearing several layers of clothing. The predisposing factor, as with many other types of superficial infection, is the presence of a warm, moist environment. Men are affected much more frequently than women. Children rarely develop tinea of the groin. Itching becomes worse as moisture accumulates and macerates this intertriginous area.

The lesions are most often bilateral and begin in the crural fold. A half moon–shaped plaque forms as a well-defined scaling, and sometimes a vesicular border advances out of the crural fold onto the thigh. The skin within the border turns red-brown, is less scaly, and may develop red papules.

This patient has two skin eruptions: 1) Tinea cruris that is in the inguinal folds and near the edge of the scrotum, and 2) An irritant dermatitis on the more distal portion of his thighs.

Tinea of the face (excluding the beard area in men), trunk, and limbs is called tinea corporis (ringworm of the body). The disease can occur at any age and is more common in warm climates. There is a broad range of manifestations, with lesions varying in size, degree of inflammation, and depth of involvement. This variability is explained by differences in host immunity and the species of fungus.

In classic ringworm, lesions begin as flat, scaly spots that then develop a raised border that extends out at variable rates in all directions. The advancing, scaly border may have red, raised papules or vesicles. The central area becomes brown or hypopigmented and less scaly as the active border progresses outward. However, it is not uncommon to see several red papules in the central area. There may be just one ring that grows to a few centimeters in diameter and then resolves or several annular lesions that enlarge to cover large areas of the body surface. These larger lesions tend to be mildly itchy or asymptomatic. They may reach a certain size and remain for years with no tendency to resolve. Clear, central areas of the larger lesions are yellow-brown and usually contain several red papules. The borders are serpiginous or annular and very irregular. Tinea from cats may appear suddenly as multiple round-to-oval plaques on the trunk and extremities.
Tinea Manum

Tinea of the Hand
Tinea of the dorsal aspect of the hand (tinea manuum) has all of the features of tinea corporis; tinea of the palm has the same appearance as the dry, diffuse, keratotic form of tinea on the soles. The dry keratotic form may be asymptomatic and the patient may be unaware of the infection, attributing the dry, thick, scaly surface to hard physical labor. Tinea of the palms is frequently seen in association with tinea pedis. The usual pattern of infection is involvement of one foot and two hands or of two feet and one hand. Fingernail infection often accompanies infection of the dorsum of the hand or palm. Treatment is the same as for tinea pedis and, as with the soles, a high recurrence rate can be expected for palm infection.

Tinea Capitus
Kerion

Tinea of the Scalp
The inflammatory response to infection is variable. A severe, inflammatory reaction with a boggy, indurated, tumorlike mass that exudes pus is called a kerion. It represents a hypersensitivity reaction to fungus and heals with scarring and some hair loss and thus requires steroids and long term systemic antifungal therapy. It is important to treat this with an oral antifungal and an oral or injectable steroid to quickly reduce the inflammation and thereby preserve the hair follicles and prevent permanent hair loss. A fungal infection of the scalp can require sometimes six months of oral antifungal therapy to eradicate it.

Fungal Infection Detection

A blue-green fluorescence of the hairs when ultraviolet A light (black light) was shined on the apparent area of involvement. This generally indicates that there is a microsporum organism present. Most tinea capitis in the United States is caused by T. tonsurans, which does not fluoresce, but prior to the 1950s fluorescent tinea capitis caused by M. canis and M. audouinii predominated. Therefore, years ago, physicians relied on the Wood’s light to make or confirm the diagnosis, but since the 1960s the majority of cases have been nonfluorescent.

Tinea Amiantacea

Young Children (Tinea Amiantacea and Blepharitis)
Seborrheic dermatitis and psoriasis may be confused with tinea of the scalp. Tinea amiantacea, a form of seborrheic dermatitis that occurs in children, is frequently misdiagnosed as tinea. Tinea amiantacea is a localized 2- to 8-cm patch of large, brown, polygonal-shaped scales that adheres to the scalp and mats the hair. The matted scale grows out, attached to the hair. There is little or no inflammation.
**Tinea of the Beard**

Fungal infection of the beard area (tinea barbae) should be considered when inflammation occurs in this area. Bacterial folliculitis and inflammation secondary to ingrown hairs (pseudofolliculitis) are common. However, it is not unusual to see patients who have finally been diagnosed as having tinea after failing to respond to several courses of antibiotics. A positive culture for staphylococcus does not rule out tinea, in which purulent lesions may be infected secondarily with bacteria. Like tinea capitis, the hairs are almost always infected and easily removed. The hairs in bacterial folliculitis resist removal.

**Tinea Versicolor**

Lesions and their distribution are highly characteristic. Lesions begin as multiple small, circular macules of various colors (white, pink, or brown) that enlarge radially. Tinea versicolor is a common fungal infection of the skin caused by a lipophilic yeast. The individual lesions and their distribution are highly characteristic. The organism is part of the normal skin flora and appears in highest numbers in areas with increased sebaceous activity. This normally nonpathogenic resident proliferates in the upper layers of the stratum corneum. The upper trunk is most commonly affected, but it is not unusual for lesions to spread to the upper arms, neck, and abdomen. Involvement of the face, back of the hands, and legs can occur. The eruption may itch if it is inflammatory, but it is usually asymptomatic. The disease diminishes or disappears with advancing age. The differential diagnosis includes vitiligo, pityriasis alba, seborrheic dermatitis, secondary syphilis, and pityriasis rosea.

**Candidiasis (Moniliasis)**

The yeast–like fungus *C. albicans* and a few other *Candida* species are capable of producing skin, mucous membrane, and internal infections. The organism lives with the normal flora of the mouth, vaginal tract, and gut, and it reproduces through the budding of oval yeast forms. Pregnancy, oral contraception, antibiotic therapy, diabetes, skin maceration, topical steroid therapy, certain endocrinopathies, and factors related to depression of cell-mediated immunity may allow the yeast to become pathogenic and produce budding spores and elongated cells (pseudohyphae) or true hyphae with septate walls. The pseudohyphae and hyphae are indistinguishable from dermatophytes in potassium hydroxide preparations. Culture results must be interpreted carefully because the yeast is part of the normal flora in many areas.

The yeast infects only the outer layers of the epithelium of mucous membrane and skin (the stratum corneum). The primary lesion is a pustule, the contents of which dissect horizontally under the stratum corneum and peel it away. Clinically, this process results in a red, denuded, glistening surface with a long, cigarette paper–like, scaling, advancing border. The infected mucous membranes of the mouth and vaginal tract accumulate scale and inflammatory cells that develop into characteristic white or white-yellow, curdy...
Yeast grows best in a warm, moist environment; therefore, infection is usually confined to the mucous membranes and intertriginous areas. The advancing infected border usually stops when it reaches dry skin.

**Lichen Planus**

Lichen planus (LP) is a unique inflammatory cutaneous and mucous membrane reaction pattern of unknown etiology. The mean age of onset is 40.3 years in males compared with 46.4 years in females. The main eruption clears within 1 year in 68% of patients, but 49% recur. The lesions in this disease appear as purple/red scaly papules that generally tend to accentuate around the wrists and ankles.

The lesions are often described as purple, polygonal, flat-topped papules. They have a light amount of scale and the lesions itch intensely.

**Miliaria**

Miliaria or heat rash is a common phenomenon occurring in predisposed individuals during periods of exertion or heat exposure. Occlusion of the eccrine sweat glands produces the condition which appears as small red papules and/or vesicles, and associated inflammation.

In this chapter we will discuss eczema, the most common inflammatory skin disease.
Although the term dermatitis is often used to refer to an eczematous eruption, the word means inflammation of the skin and is not synonymous with eczematous processes. An eczematous inflammation consists of erythema, scale, and vesicles and can be differentiated from psoriasiform or lichenoid processes by the presence of these three features.

This is a summary of the major patterns of dermatitis (redness and scaling or redness and oozing) that a primary care provider will generally see. The four major eczematous patterns are Atopic dermatitis, Nummular Eczema, Lichen simplex chronicus, Seborrheic Dermatitis.

Allergic contact dermatitis is a delayed hypersensitivity reaction that affects a limited number of individuals after one or a few exposures to an antigenic substance. In this picture, this twelve year-old girl has developed a hypersensitivity to the nickel in the safety-pin holding her head covering.

Contact dermatitis is an eczematous dermatitis caused by exposure to substances in the environment. Those substances act as irritants or allergens and may cause acute, subacute, or chronic eczematous inflammation. To diagnose contact dermatitis, one must first recognize that an eruption is eczematous. Contact allergies often have characteristic distribution patterns indicating that the observed eczematous eruption is caused by external rather than internal stimuli. Patients vary in their ability to withstand exposure to irritants. Some people cannot tolerate frequent hand washing, whereas others may work daily with harsh cleaning solutions without any difficulty. The picture on the right is of a patient with photosensitivity.
Atopic Dermatitis
The major symptom of dermatitis is itching. Often the skin of those who are predisposed to dermatitis can itch, even though the skin appears normal. The term atopy refers to a group of patients who have a personal or family history of one or more of the following diseases: hay fever, asthma, very dry skin, and eczema. Atopic dermatitis is an eczematous eruption that is itchy, recurrent, flexural, and symmetric. It generally begins early in life, follows periods of remission and exacerbation, and usually resolves by the age of 30. The disease characteristics vary with age. Infants have facial and patchy or generalized body eczema. Adolescents and adults have eczema in flexural areas and on the hands.

Some families are known as "wheezers and sneezers." About two-thirds of patients who have atopic dermatitis will give a personal or family history of these problems.

Atopic Dermatitis
Atopic dermatitis in children often manifests as "cradle cap." This is redness and scaling involving the scalp, and can be the lone manifestation of this problem. Infants commonly develop a greasy adherent scale on the vertex of the scalp. Minor amounts of scale are easily removed by frequent shampooing with products containing sulfur and salicylic acid (e.g., Sebulex shampoo). Scale may accumulate and become thick and adherent over much of the scalp and may be accompanied by inflammation. Secondary infection can occur. Atopic dermatitis often involves the cheeks of children.

Atopic Dermatitis in Children
Atopic dermatitis often involves the trunk of children and imparts a sandpaper or rough feel to the skin. Children who have atopic dermatitis can have a sandpaper feel, but the skin itches, and they feel well otherwise. The skin of children who have scarlatina can look and feel like sandpaper, but the skin is often sensitive to touch, there is no itching, and the children are ill. I have seen both simultaneously in the same child, and usually it appears to be a flare of eczema with an accentuation of redness on the cheeks, sometimes a white coating of the tongue, and the child is ill.
In adults who suffer atopic dermatitis, often the eyelids are red and scaly.

Atopic dermatitis involving the neck and axilla.

Nummular dermatitis tends to be symmetrical, and the lesions consist of red, scaly patches that usually itch intensely.

Coalescing lesions can be seen on the left.

Lesions of acute (red and oozing) nummular dermatitis on the buttocks.
Lichen simplex chronicus is sometimes referred to as baseball player's disease: they itch and scratch where baseball player's tend to itch and scratch (shins, groin, buttocks, extensor forearms, and nape of neck). After repeated scratching, the epidermis thickens and darkens as shown here; this is called lichenification.

The redness and scaling of seborrheic dermatitis can involve any of the areas shown here.

Seborrheic Dermatitis

Seborrheic dermatitis is a common, chronic, inflammatory disease with a characteristic pattern for different age groups. The yeast *Pityrosporum ovale* probably is a causative factor, but both genetic and environmental factors seem to influence the onset and course of the disease. Many adult patients have an oily complexion, the so-called seborrheic diathesis. In adults, seborrheic dermatitis tends to persist, but it does undergo periods of remission and exacerbation. The extent of involvement among patients varies widely. Most cases can be adequately controlled.

An example of seborrhea of the forehead.

Seborrheic dermatitis may involve eyelashes, eyebrows or the beard.
Urticaria

Urticaria, also referred to as hives or wheals, is a common and distinctive reaction pattern. Hives may occur at any age; up to 20% of the population will have at least one episode. Hives may be more common in atopic patients. Urticaria is classified as acute or chronic. The majority of cases are acute, lasting from hours to a few weeks. Because most individuals can diagnose urticaria and realize that it is a self-limited condition, they do not seek medical attention.

Severe Dry Skin (Xerosis)

Dry skin is more severe in the winter months when the humidity is low. “Winter itch” most commonly affects the hands and lower legs. Initially the skin is rough and covered with fine white scales. Thicker tan or brown scales may appear. The most severely affected skin may be crisscrossed with shallow red fissures. Dry skin may itch or burn.

Acne

Acne, a disease of the pilosebaceous unit, appears in males and females near puberty and in most cases becomes less active as adolescence ends. The intensity and duration of activity varies for each individual. The disease may be minor, with only a few comedones or papules, or it may occur as the highly inflammatory and diffusely scarring acne conglobata. The severest forms of acne occur more frequently in males, but the disease tends to be more persistent in females, who may have periodic flares prior to menstrual periods, which continue until menopause.

Postadolescent acne in women. A low-grade, persistent acne is common in professional women. Closed comedones are the dominant lesions, with a few papulopustules. Premenstrual flares are typical. Many of these patients passed through adolescence without acne. One author postulated that chronic stress leads to enhanced secretion of adrenal androgens, resulting in sebaceous hyperplasia and subsequent induction of comedones.
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The picture on the left demonstrates closed comedones while the one on the right shows open comedo clinically and histologically. The black comes from melanin and not from dirt.

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This is the back of a patient with severe nodulocystic acne. The nodules, cysts, and scarring are evident. This is both painful and disfiguring, and can have a profound detrimental psychological effect on the person who suffers this.

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Rosacea

- Staged 1-4
- Appears at 30-50 yr
- Slow onset aggravated by cold, ethyl alcohol, hot foods, stress;
- Central face
- Erythema, telangiectasias, papules/pustules;
- Can present with rhinophyma or chronic eye inflammation

Rosacea occurs after the age of 30 and is most common in people of Celtic origin. The resemblance to acne is at times striking. The cardinal features are erythema and edema, papules and pustules, and telangiectasia. The patient usually has underlying erythema on the nose and cheeks, and generally has superimposed red papules and pustules on these areas. The first stage of rosacea consists of only erythema, and the second stage consists of the superimposed red papules and pustules. Chronic, deep inflammation of the nose leads to an irreversible hypertrophy called rhinophyma.

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Stage 1: frequent episodes of flushing
Stage 2: persistent erythema and telangiectases
Stage 3: papules and pustules (occasionally cysts)
Stage 4: Rhynophyma (occasionally oto-, mento-, or zygophyma)

This patient has moderate Stage 2 Rosacea.

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Patients with rosacea often have eye involvement, which can consist of styes as shown here.
Ocular rosacea. Manifestations of this disease range from minor to severe. Symptoms frequently go undiagnosed because they are too nonspecific. The prevalence in patients with rosacea is as high as 58%, with approximately 20% of those patients developing ocular symptoms before the skin lesions. A common presentation is a patient with mild conjunctivitis with soreness, grittiness, and lacrimation. Patients with ocular rosacea have been reported to have subnormal tear production (dry eyes), and they frequently have complaints of burning that are out of proportion to the clinical signs of disease.

This patient has rather severe Stage 2 rosacea (red papules and pustules), and is developing Stage 3 rosacea (rhinophyma).

The etiology is in fact unknown. Alcohol may accentuate erythema, but does not cause the disease. Sun exposure may precipitate acute episodes, but solar skin damage is not a necessary prerequisite for its development. Part of the clinical picture is a functional impairment of venous flow resulting in facial vasodilation and an abnormal vascular response to heat and other stimuli may lead to a sequence of changes resulting in persistent erythema, telangiectasia, edema, and subsequent inflammatory events. Hot beverages should be avoided to decrease flushing. A significant increase in the hair follicle mites Demodex folliculorum is found in rosacea. Increased mites may play a part in the pathogenesis of rosacea by provoking inflammatory or allergic reactions, by mechanical blockage of follicles, or by acting as vectors for microorganisms.
Bacterial infections of the skin usually cause redness, swelling, scaling and blistering. Epidermal infections usually involve itching. Dermal infections usually involve pain and burning.

Hidradenitis Suppurativa
Hidradenitis suppurativa is a chronic suppurative and scarring disease of the skin and subcutaneous tissue occurring in the axillae, the anogenital regions, and under the female breast and this image could be described as nodules and cysts on a violaceous base

Comments: This 20 year old man was frustrated by painful recurrent and persistent nodules, cysts, sinus tracts in the groin and axillae. He improved temporarily with oral antibiotics and topical wound care measures.

Skin Infections
The two gram-positive cocci, *Staphylococcus aureus* and the group A beta-hemolytic streptococci, account for the majority of skin and soft tissue infections. The streptococci are secondary invaders of traumatic skin lesions and cause impetigo, erysipelas, cellulitis, and lymphangitis. *S. aureus* invades skin and causes impetigo, folliculitis, cellulitis, and furuncles. Elaboration of toxins by *S. aureus* causes the lesions of bullous impetigo and staphylococcal scalded skin syndrome.

Infection just beneath the stratum corneum of streptococcus or staphylococcus is called impetigo. The stratum corneum is readily torn off, and generally the serous ooze from the dermal blood vessels dries on the skin and produces a honey-colored crust

Folliculitis
Folliculitis is inflammation of the hair follicle caused by infection, chemical irritation, or physical injury. Inflammation may be superficial or deep in the hair follicle. Folliculitis is very common and is seen as a component of a variety of inflammatory skin diseases.
**Pseudomonas Folliculitis**

The typical patient has a few to more than 50 0.5- to 3-cm, pruritic, round, urticarial plaques with a central papule or pustule located on all skin surfaces except the head. The rash may be follicular, maculopapular, vesicular, pustular, or a polymorphous eruption that includes all of these types of lesions.

From 8 hours to 5 days or longer (mean incubation period is 48 hours) after using a contaminated whirlpool, home hot tub, waterslide, physiotherapy pool, or contaminated loofah sponge, more than ¾ of those exposed develop *Pseudomonas* folliculitis.

Furuncle. This is a deep infection of a hair follicle caused by staphylococcal aureus.

This patient had a furuncle, and then the infection spread in the underlying fat and created cellulitis in the surrounding fat.

The red streak in this picture depicts inflammation of the ascending lymphatics with the same infection process as involves the fourth toe. Ascending lymphangitis is usually caused by strep or staph.

Erysipelas (sharp red border) on the face. This is an infection of the dermis, and if the patient is having significant paraorbital pain, then intramuscular or intravenous antibiotics should be used.
Gonorrhea

Gonorrhea is a common sexually transmitted disease. The responsible organism, *Neisseria gonorrhoeae*, can survive only in a moist environment approximating body temperature and is transmitted only by sexual contact (genital, genital-oral, or genital-rectal) with an infected person. It is not transmitted through toilet seats or the like. Purulent burning urethritis in males and asymptomatic endocervicitis in females are the most common forms of the disease, but gonorrhea is also found at other sites. All forms of the disease have the potential for evolving into a bacteremic phase, producing the arthritis-dermatitis syndrome. From an epidemiologic point of view the disease is becoming more difficult to control because of the increasing number of asymptomatic male carriers. All forms of the disease previously responded to penicillin, but resistant strains have emerged.

Nongonococcal Urethritis

Nongonococcal urethritis (NGU) (nonspecific urethritis) and cervicitis are the most common sexually transmitted diseases in the United States. The diagnosis, as the name implies, used to be one of exclusion; however, routine diagnostic tests for identifying the various infecting organisms are now available. *C. trachomatis* causes 23% to 55% of cases of NGU. *C. trachomatis* is recovered in up to 50% of men with NGU. *C. trachomatis* is isolated in up to 50% of women with mucopurulent cervicitis and approximately 25% to 50% of women with PID. *U. urealyticum* causes 20% to 40% of cases, and *T. vaginalis* causes 2% to 5%.

Most women with cervical chlamydial infection, most homosexual men with rectal chlamydial infection, and as many as 30% of heterosexual men with chlamydial urethritis have few or no symptoms.

Primary Syphilis

Primary syphilis, characterized by a cutaneous ulcer, is acquired by direct contact with an infectious lesion of the skin or the moist surface of the mouth, anus, or vagina. From 10 to 90 days (average, 21 days) after exposure, a primary lesion, the chancre, develops at the site of initial contact. Chancrees are usually solitary, but multiple lesions are not uncommon. Extranatal chancres account for 6% to 7% of all chancres, and most occur on the lips and in the oral cavity and are transmitted by kissing or orogenital sex. The lesion begins as a papule that undergoes ischemic necrosis and erodes, forming an 0.3 to 2.0 cm, painless to tender, hard, indurated ulcer; the base is clean, with a scant, yellow, serous discharge. Because the chancre began as a papule, the borders of the ulcer are raised,
smooth, and sharply defined. The chancre of chancroid is soft and painful. Painless, hard, discrete regional lymphadenopathy occurs in 1 to 2 weeks; the lesions never coalesce or suppurate unless there is a mixed infection. Without treatment the chancre heals with scarring in 3 to 6 weeks. Painless vaginal and anal lesions may never be detected. The differential diagnosis includes ulcerative genital lesions such as chancroid, herpes progenitalis, aphthae (Behçet’s syndrome), and traumatic ulcers such as occur with biting.

Secondary Syphilis
Secondary syphilis is characterized by mucocutaneous lesions, a flu-like syndrome, and generalized adenopathy. It occurs in 25% of untreated cases of syphilis and occurs between 2 weeks and six months after the primary chancre appears. As with most other systemic cutaneous diseases, the rash is usually bilaterally symmetric. The lesions of secondary syphilis are noninflammatory, develop slowly, and may persist for weeks or months. Pain or itching is minimal or absent. Various types of lesions present simultaneously, unlike other eruptive skin diseases in which the morphologic appearance of the lesions is uniform. The color is characteristic, resembling a “clean-cut ham” or having a coppery tint. Lesions may assume a variety of shapes, including round, elliptic, or annular and may be described as maculopapular, papular, macular, annular, papulopustular, psoriasiform, or follicular. Eruptions may be limited and discrete, profuse, generalized, or more or less confluent and may vary in intensity.

The lesions of secondary syphilis that occur around the genitalia are called condyloma latum. These lesions are flatter and not pedunculated as are the condylomas associated with venereal warts.

Tertiary Syphilis
In a small number of untreated or inadequately treated patients, systemic disease develops, including cardiovascular disease, central nervous system (CNS) lesions, and systemic granulomas (gummas).
Lymphogranuloma Venereum

There are 15 serotypes of *C. trachomatis*, three of which (serovars L1, L2, or L3) cause lymphogranuloma venereum (LGV). These serotypes are more invasive and not limited to mucous membranes. LGV is mainly a disease of lymphatic tissue that spreads to tissue surrounding lymphatics.

**Primary lesion.** After an incubation period of 5 to 21 days, a small papule or viral (herpetiform) vesicle occurs on the penis, fourchette, posterior vaginal wall, or cervix (Figure 10-15). The lesion evolves rapidly to a small, painless erosion that heals without scarring. The lesion may be so innocuous that the patient may not remember it. The primary lesion is rarely seen in women.

**Lymphadenopathy.** Unilateral or sometimes bilateral inguinal lymphadenopathy accompanied by headache, fever, and migratory polymyalgia and arthralgia appears from 1 to 4 weeks after the primary lesion heals. In a short time the lymph nodes become tender and fluctuant and are referred to as buboes when they ulcerate and discharge purulent material. Draining buboes may persist for months. Inflammation spreads to adjoining nodes and leads to matting. For unexplained reasons, inflammation of the perineal lymph nodes develops in women and may lead to scarring and ulceration of the labia, rectal mucosa, and vagina. Chronic edema (elephantiasis) of the female external genitals is a late manifestation of lymphatic obstruction.

Chancroid

Chancroid (soft chancre) is the most common of the minor venereal diseases. It is caused by the short gram-negative rod *H. ducreyi*. The male/female ratio of reported cases is approximately 10:1. Chancroid predominantly affects heterosexual men, and most cases originate from prostitutes who are often carriers with no symptoms. The disease is common and endemic in many parts of the world. In the United States chancroid typically occurs in epidemics. A high rate of HIV infection among patients with chancroid has been reported.

**Primary state.** After an incubation period of 3 to 5 days, a painful, red papule appears at the site of contact and rapidly becomes pustular and ruptures to form an irregular-shaped, ragged ulcer with a red halo. The ulcer is deep, not shallow as in herpes; bleeds easily; and spreads laterally, burrowing under the skin and giving the lesion an undermined edge and a base covered by yellow-gray exudate. The ulcers are highly infectious, and multiple lesions appear on the genitals from autoinoculation. Unlike syphilis, the ulcers may be so painful that some patients refuse the manipulation necessary to obtain culture material. Untreated cases may resolve spontaneously or, more often, progress to cause deep ulceration, severe phimosis, and scarring. Systemic symptoms, including anorexia, malaise, and low-grade fever, are occasionally present. Females may have multiple, painful ulcers on the labia and fourchette and, less often, on the vaginal walls and cervix. Autoinoculation results in lesions on the thighs, buttocks, and anal areas. Female carriers may have no detectable lesions and may be without symptoms.
Molluscum Contagiosum is caused by a DNA poxvirus, the largest virus known. Most patients are asymptomatic; some complain of pruritus, tenderness, and pain. Some develop eczema around lesions (10% in series of 95 and 200 cases). The incubation period ranges from weeks to months (14-50 d). If patients have eczema or other diseases altering skin barrier function, molluscum may spread more rapidly in affected areas.

The primary lesion is a firm, smooth, umbilicated papule, usually 2-6 mm in diameter (range 1-15 mm) which may be present in groups or widely disseminated on the skin and mucosal surfaces. Lesions greater than 15 mm have been described, particularly in patients with AIDS. The lesions can be flesh-colored, white, translucent, or even yellow in color. The number of lesions varies from 1-20 up to hundreds in some reports. Some lesions become confluent to form a plaque. Lesions generally are self-limited but can persist for several years.

In children, lesions mainly on the trunk and extremities. In adults, lesions often are located on the lower abdominal wall, inner thighs, pubic area, and genitalia. Genital molluscum contagiosum in children may be a manifestation of sexual abuse.

Molluscum contagiosum is a common and at times severely disfiguring eruption in patients with HIV infection. It is often a marker of late-stage disease.

Genital Herpes Simplex

Herpes simplex infection of the penis (herpes progenitalis), and rectum is pathophysiologically identical to herpes infection in other areas. Rarely seen a few decades ago, it has reached epidemic proportions. Recurrences cannot be predicted, but they often follow sexual intercourse.

Genital herpes is primarily a disease of young adults. Both antigenic type 1 and type 2 infect the genital area. The virus can be cultured for approximately 5 days from active genital lesions, and the lesions are almost certainly infectious during this time. There is evidence that both males and females who have no symptoms can transmit the disease. Infection can develop in male patients from contact with female carriers who have no obvious disease. The infection may be acquired from an active cervical infection or from cervical secretions of a female who chronically carries the virus, from vulvar ulcers, from fissures, and from anorectal infection.
Oral-Labial Herpes Simplex

Primary infection. Gingivostomatitis and pharyngitis are the most frequent manifestations of first-episode HSV-1 infection. Infection occurs most commonly in children between ages 1 and 5 years. The incubation period is 3 to 12 days. Although most cases are mild, some are severe. Sore throat and fever may precede the onset of painful vesicles occurring anywhere in the oral cavity. The vesicles rapidly coalesce and erode with a white, then yellow, superficial, purulent exudate. Pain interferes with eating and tender cervical lymphadenopathy develops. Fever subsides in 3 to 5 days and oral pain and erosions are usually gone in 2 weeks; in severe cases, they may last for 3 weeks.

Recurrent infection. Recurrences average 2 to 3 each year but may happen as often as 12 times a year. Oral HSV-1 infections recur more often than oral HSV-2 infections. Recurrent oral herpes simplex can appear as a localized cluster of small ulcers in the oral cavity, but the most common manifestation is eruptions on the vermilion border of the lip (recurrent herpes labialis). Fever (fever blisters), upper respiratory infections (cold sores), and exposure to UV light, among other things, may precede the onset.

Treatment. Oral acyclovir can be used to treat the primary infection and to prevent recurrent disease. The lips should be protected from sun exposure with opaque creams such as zinc oxide or with sun-blocking agents incorporated into a lip balm (Chapstick 15). A cool water or Burrow’s compress decreases erythema and debrides crusts to promote healing.

Warts

Warts are benign epidermal neoplasms. Different viruses cause different types of warts. At least 60 distinct types of human papilloma virus (HPV) have been identified by their DNA composition. Each of the HPV types is associated with a particular set of clinical and pathologic entities. HPV-16 and HPV-18 have been found in cervical cancers.

Warts commonly occur in children and young adults, but may appear at any age. Their course is highly variable. Most resolve spontaneously in weeks or months; others may last years or a lifetime. Warts are transmitted simply by touch; it is not unusual to see warts on adjacent toes (“kissing lesions”).

Warts on the face are often flat, measure 1 to 5 mm in diameter, and sometimes are slightly darker than normal skin.
Genital Warts

Genital warts are very contagious. Recent studies show that almost two-thirds of persons who had one sexual contact with a person who had warts would then themselves develop warts. The incidence exceeds the incidence of genital herpes. The evidence supporting the relationship between genital warts and genital cancer is overwhelming.

Genital warts (condyloma acuminata or venereal warts) are pale pink with numerous, discrete, narrow-to-wide projections on a broad base. The surface is smooth or velvety, moist, and lacks the hyperkeratosis of warts found elsewhere. The warts may coalesce in the rectal or perineal area to form a large, cauliflower-like mass.

Warts spread rapidly over moist areas and may therefore be symmetric on opposing surfaces of the labia or rectum. Common warts can possibly be the source of genital warts, although they are usually caused by different antigenic types of virus. Warts may extend into the vaginal tract, urethra, and rectum. Genital warts frequently recur after treatment.

Oral condyloma in patients with genital human papilloma virus infection. One study showed that 50% of patients with multiple and widespread genital human papilloma virus (HPV) infection who practiced orogenital sex have oral condylomas. All lesions were asymptomatic. Magnification was necessary to detect oral lesions. The tongue was the site most frequently affected. Oral condylomas appeared as multiple, small, white or pink nodules, sessile or pedunculate, and as papillary growths with filiform characteristics. The size of oral lesions was greater than 2 mm in more than 50% of lesions, and, in 61% of cases, more than five lesions were present. HPV types 16, 18, 6, and 11 were found.

Genital warts in children. It has been estimated that at least 50% of the cases of condyloma acuminata in children are the result of sexual abuse. possibility that such an event occurred. Virus typing will be helpful in sorting out these problems when the test becomes more widely available.

These are calluses on the hand, and when viewed closely the skin lines can be seen to extend through the calluses.
Eczema Herpeticum

Eczema herpeticum (Kaposi’s varicelliform eruption) is the association of two common conditions: atopic dermatitis and herpes simplex virus infection. Certain atopic infants and adults may develop the rapid onset of diffuse cutaneous herpes simplex. The severity of infection ranges from mild and transient to fatal. The disease is most common in areas of active or recently healed atopic dermatitis, particularly the face, but normal skin can be involved. The disease in most cases is a primary herpes simplex infection. In one third of the patients in a particular study, there was a history of herpes labialis in a parent in the previous week. Recurrences are uncommon and usually limited. Approximately 10 days after exposure, numerous vesicles develop, become pustular, and umbilicate markedly. Secondary staphylococcal infection commonly occurs. Viremia with infection of internal organs can be fatal. Recurrent disease is milder and usually without constitutional symptoms.

Treatment. Eczema herpeticum of the young infant is a medical emergency. Early treatment with acyclovir can be life saving. Eczema herpeticum is managed with cool, wet compresses, similar to the management of diffuse genital herpes simplex. Oral dosages of acyclovir 25 to 30 mg/kg/day have been effective. Oral antistaphylococcal antibiotics are an important part of treatment.

Varicella

Varicella, or chicken pox, is a highly contagious viral infection that, during epidemics, affects the majority of urban children before puberty. The incidence peaks sharply in March, April, and May in temperate climates. Transmission is by airborne droplets or vesicular fluid. Patients are contagious from 2 days before onset of the rash until all lesions have crusted. The systemic symptoms, extent of eruption, and complications are greater in adults; thus some parents intentionally expose their young children. Patients with defective, cell-mediated immunity or those using immunosuppressive drugs, especially systemic corticosteroids, have a prolonged course with more extensive eruptions and a greater incidence of complications. An attack of chicken pox usually confers lifelong immunity. Varicella vaccine is now available in the U.S. from Merck, Inc. It is approved for use in children and adults.

Clinical course. The incubation period averages 14 days, with a range of 9 to 21 days; in the immunosuppressed host, the incubation period can be shorter. The prodromal symptoms in children are absent or consist of low fever, headache, and malaise, which appear directly before or with the onset of the eruption. In adults, symptoms consist of fever, chills, malaise, and backache, which are more severe, and occur 2 to 3 days before the eruption.

Eruptive phase. The rash begins on the trunk (centripetal distribution) (Figure 12-33) and spreads to the face (Figure 12-34) and extremities (centrifugal spread). The extent of involvement varies considerably. Some children have so few lesions that the disease goes unnoticed. Older children and adults have a more extensive eruption involving all areas, sometimes with lesions too numerous to count.
Herpes Zoster

Herpes zoster, or shingles, a cutaneous viral infection generally involving the skin of a single dermatome (Figure 12-38), occurs during the lifetime of 10% to 20% of all persons. People of all ages are afflicted; it occurs regularly in young individuals, but the incidence increases with age. There is an increased incidence of zoster in normal children who acquire chicken pox when younger than 2 months. Patients with zoster are not more likely to have an underlying malignancy. Zoster may be the earliest clinical sign of the development of the acquired immunodeficiency syndrome in high-risk individuals.

Zoster results from reactivation of varicella virus that entered the cutaneous nerves during an earlier episode of chicken pox, travelled to the dorsal root ganglia, and remained in a latent form. Age, immunosuppressive drugs, lymphoma, fatigue, emotional upsets, and radiation therapy have been implicated in reactivating the virus, which subsequently travels back down the sensory nerve infecting the skin.

The predisposition in the elderly for the development of herpes zoster is considered to be a consequence of diminishing immunologic function. The elderly are also at greater risk to develop segmental pain, which can continue for months after the skin lesions have healed.

Eczema Herpeticum

This patient developed herpes zoster in the first branch of the trigeminal nerve. Note that she has crusting present which could be secondary to resolving herpetic lesions or to secondary infection, usually with staphylococcus aureus. If the globe of the eyes is involved with erythema, or if the tip of the nose is involved (involvement of the nasociliary branch), or if the patient complains of any facial disturbance, the patient should be referred emergently to an ophthalmologist.

Hand Foot and Mouth Disease

Hand, foot, and mouth disease, which has no relation to hoof-and-mouth disease in cattle, is one of the most distinctive disease complexes caused by Coxsackie virus. This contagious disease may occur as an isolated phenomenon, or it may occur in epidemic form. It is more common among children. The incubation period is 4 to 6 days. There may be mild symptoms of low-grade fever, sore throat, and malaise for 1 or 2 days. Twenty percent of patients develop submandibular and/or cervical lymphadenopathy.

Eruptive phase. Oral lesions, present in 90% of cases, are generally the initial sign. Aphthae-like erosions varying from a few to 10 or more appear anywhere in the oral cavity and are most frequently small and asymptomatic. The cutaneous lesions, which occur in approximately two thirds of patients, appear less than 24 hours after the enanthem. They begin as 3- to 7-mm, red macules that rapidly become pale, white, oval vesicles with a red areola. The vesicles occur on the palms, soles, dorsal aspects of the fingers and
Pityriasis Rosea

Pityriasis rosea is a common, benign, usually asymptomatic, distinctive, self-limiting skin eruption of unknown etiology. There is recent evidence that it is caused by HHV6. Small epidemics have occurred in fraternity houses and military bases. It occurs more commonly in women. Most patients are between the ages of 10 and 35 years, with a mean age of 23 years and an age range of 4 months to 78 years. The incidence of disease is higher during the colder months. Twenty percent of patients have a recent history of acute infection with fatigue, headache, sore throat, lymphadenitis, and fever; the disease may be more common in atopic patients. Patients generally present with multiple red, scaly, oval macules and papules involving mainly the trunk. In pityriasis rosea there is often a large herald patch that occurs on the trunk or thighs hours to days before the rest of the lesions appear. The lesions are described as being salmon-colored and having a slight amount of scale. Pityriasis rosea and multiple small annular lesions of ringworm may appear to be similar. However, the scaly ring of pityriasis rosea does not reach the edge of the red border as it does in tinea. Other distinguishing features of pityriasis rosea include rapid onset of lesions and localization to the trunk.

Erythema Infectiosum

Erythema infectiosum (fifth disease) is caused by the B19 parvovirus. It is relatively common, mildly contagious, and appears sporadically or in epidemics. Peak attack rates occur in children between 5 and 14 years of age; more than 50% of adults have serologic evidence of past infection. Asymptomatic infection is common. Parvovirus B19 infection can cause severe complications in pregnant women, individuals with hemolytic anemia, and those who are immunocompromised. People who do not have erythrocyte Parvovirus antigen, which is the cellular receptor for parvovirus B19, are naturally resistant to infection with this virus. Symptoms are usually mild or absent. Pruritus, low-grade fever, malaise, and sore throat precede the eruption in approximately 10% of cases. Lymphadenopathy is absent. Older individuals may complain of joint pain. Eruptive phase. There are three distinct, overlapping stages. Facial erythema ("slapped cheek"). Red papules on the cheeks rapidly coalesce in hours, forming red, slightly edematous, warm, erysipelias-like plaques that are symmetric on both cheeks and spare the nasolabial fold and the circumoral region. The "slapped cheek" appearance fades in 4 days.
Net pattern erythema. This unique characteristic eruption—erythema in a fishnetlike pattern—begins on the extremities approximately 2 days after the onset of facial erythema and extends to the trunk and buttocks, fading in 6 to 14 days (Figure 14-17). At times, the exanthem begins with erythema and does not become characteristic until irregular clearing takes place. Livedo reticularis has a similar netlike pattern, but it does not fade quickly.

Recurrent phase. The eruption may fade and then reappear in previously affected sites on the face and body during the next 2 to 3 weeks. Temperature changes, emotional upsets, and sunlight may stimulate recurrences. The rash fades without scaling or pigmentation. There may be a slight lymphocytosis or eosinophilia.

The petechial glove and sock syndrome. A recently described febrile dermatosis characterized by (1) fever, (2) pruritic edema, followed by pain and petechial involvement of hands and feet with sharp demarcation at the wrists and ankles, and (3) an enanthem of petechiae and oral erosions may be caused by human parvovirus B19.27

This child has measles (rubeola). The child often develops a barking cough and runny eyes and nose about three days before the eruption starts. The red macules and papules start on the upper portion of the head, and then move downwards. They disappear in this same order after about 7 days.

The patient may or may not have a viral syndrome, but quite often develops postauricular and suboccipital lymph node enlargement. The red macules and papules of the eruption start at the forehead, and then continue to erupt in a downward direction. The eruption generally clears starting from the forehead and the eruption usually only lasts about three days.

The child normally looks and feels well but has a temperature of about 104 degrees Fahrenheit for about three days. The temperature then drops, and as it does numerous red macules and papules appear predominantly on the trunk; they occasionally appear on the extremities and the face.
Who in NC has not seen a tick bite. If you were asked by someone who has had a tick how long they have to wait before they are out of the woods (so to speak) regarding acquiring tick borne disease(s), the answer is one week.

Infestation with head lice at the nape of the neck produces redness and scaling of the skin, and the black/brown/gray nits (eggs) can be seen on the hair shafts, and occasionally the adult lice can be seen on the skin.

Typical distribution of inflammatory papules in adults who contract scabies.

Children who have scabies generally have inflammatory papules in the axillae. This shows typical axillary lesions or in the web spaces of the hands.
Brown Recluse Spiders are common inhabitants of North Carolina gardens. They are not aggressive but will bite when threatened. Patients generally are not aware of a bite until 24 hours later when they first notice a pruritic blister which eventually evolves into an edematous inflamed area with blistering and a central purple eschar. The ulceration progresses for several weeks and healing generally takes several months.

Actinic keratoses generally appear as rough, red/brown, scaly macules or papules on the skin. They start to appear usually about age 30 or older.
Slide 111

This woman has multiple actinic keratoses, and the scale is very pointed, tenacious, and is very hard to pick off.

Slide 112

One actinic keratosis per thousand actinic keratoses per year will progress into the underlying dermis and develop into a squamous cell carcinoma. Squamous cell carcinomas look like very large actinic keratoses in that they have scale, they are thick, and they have underlying erythema.

Slide 113

Solar keratoses & squamous cell carcinoma

Slide 114

Basal cell carcinomas are generally induced by ultraviolet light, and they start to appear at about age 30 in sunlight exposed areas. They appear as a flesh-colored, or red, or pearly papule. They particularly appear pearly if the skin is stretched to accentuate the translucence.

Slide 115

This is a basal cell carcinoma on the forehead of a young woman in her 20's.
Superficial spreading basal cell carcinoma. This appears as a red, pearly or scaly plaque with a slightly elevated ridge that is described as appearing like a piece of thread. These tend to grow rather broadly, and generally do not penetrate very deeply into the underlying dermis. They are found almost exclusively on the trunk.

Basal cell carcinoma. This patient had spent her younger years in Chihuahua, Mexico, and had been exposed to a lot of sunlight as a young person. This basal cell carcinoma originated within the epidermis and extended through the skin fat, and attached to the underlying muscle.

Melanomas generally exhibit a mixture of colors and/or an irregular jagged or notched border.

Mycosis fungoids is a T-cell lymphoma that occurs generally in people in their 50’s or 60’s and older. From the time of diagnosis until death, the average life expectancy is 8.3 years. As more lymphocytes accumulate within the epidermis and dermis, tumors of mycosis fungoids are formed, and often skin will break down.

- Brown nails
  - Consider staining (nicotine, potassium permanganate, nail varnish) and chemotherapy. Illustrated are staining from podophyllin (top image) and streaks due to oral hydroxyurea (bottom image).
Slide 121
Yellow Nail Syndrome
- Yellow or green nails due to lymphatic obstruction in cardiopulmonary disease

Slide 122
Green Nails
Pseudomonas/Candida Infection

Slide 123
Yellow Nails
- Due to the dermatophyte onychomycosis

Slide 124
Yellow Nails
- Due to psoriasis

Slide 125
White Nails
- Due to vitiligo (see white patches on adjacent skin)
White Nails
Due to trauma

Onycholysis
- Onycholysis
  - White or yellow distal nail lifted off
  - Consider idiopathic causes, trauma, psoriasis (top), thyrotoxicosis, irritant & allergic contact dermatitis, drug photosensitivity, i.e., tetracycline (lower left), fungal nail infection (candida: lower right)

Half and Half Nails
Seen in renal failure
White proximal nail, brown distal nail

Terry’s Nails
Seen in liver cirrhosis
White proximal nail, reddened distal nail

Ragged Cuticles
Consider Connective tissue disease
Slide 131

Vasculitis
Distal Digital Infarcts

Slide 132

Acute Paronychia
Staphylococcus aureus (right)
Herpes Simplex (below)

Slide 133

Chronic Paronychia
Due to Candida

Slide 134

Clubbing
Bulbous uniform swelling of the soft tissue of the terminal phalanx of a digit with subsequent loss of the normal angle between the nail and the nailbed. Due to chronic cardiopulmonary disease, liver or bowel disease, thyroid disease (acropachy)

Slide 135

Abnormal Nail Shapes
- Koilonychia
  Thin spoon-shaped nail associated with iron deficiency anemia
- Pachyonychia
  Wedge-shaped nails
- Pincer Nails