DERMATOLOGICAL MANIFESTATIONS OF HUMAN IMMUNODEFICIENCY VIRUS DISEASE

Initial Reports

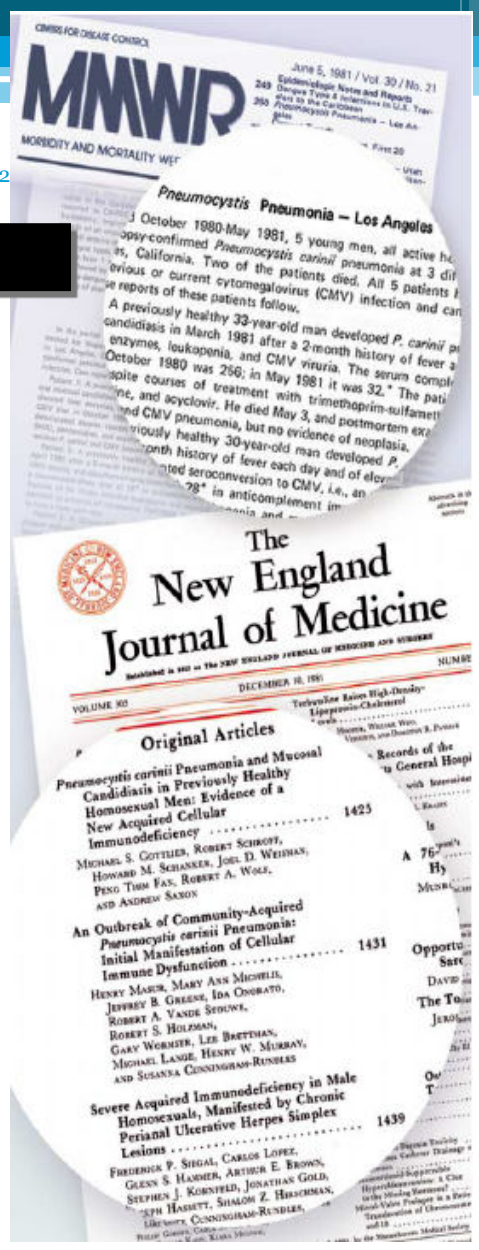
- June 5, 1981: 5 cases of PCP in gay men from UCLA (MMWR)

1981 June 5;30:250–2

Pneumocystis Pneumonia — Los Angeles

In the period October 1980-May 1981, 5 young men, all active homosexuals, were treated for biopsy-confirmed *Pneumocystis carinii* pneumonia at 3 different hospitals in Los Angeles, California. Two of the patients died. All 5 patients had laboratory-confirmed previous or current cytomegalovirus (CMV) infection and candidal mucosal infection. Case reports of these patients follow.

- July 3, 1981: 26 additional cases
- Dec 10, 1981: 3 NEJM papers describe cases



Human immunodeficiency virus

- Discovered independently by Luc Montagnier of France and Robert Gallo of the US in 1983-84.
- Former names of the virus include:
  - Human T cell lymphotrophic virus (HTLV-III)
  - Lymphadenopathy associated virus (LAV)
  - AIDS associated retrovirus (ARV)

HIV…..

- 2 main types of HIV- 1 & 2
- Worldwide, HIV.1 is by far the commonest cause of AIDS.

HIV.....

- HIV-2 discovered in 1986, antigenically distinct virus , endemic in West Africa.
- HIV.2- differs in a number of its regulatory genes ,
- apparently causes immune deficiency and AIDS more slowly than HIV.1 and
- is less infectious with lower rates of either sexual or mother-to-child transmission.

Transmission::::::

- Sexual- 0.1 – 1.0%
- Blood & blood products- >90%
- Tissue & organ donation- 50-90%
- Inj – 0.3%
- IDU- 1-10%
- MTCT- 30%

Characteristics of the virus

- Icosahedral (20 sided), enveloped virus of the lentivirus subfamily of ***retroviruses.***
- Retroviruses transcribe RNA to DNA.
- Two viral strands of RNA found in core surrounded by protein outer coat.
  - Outer envelope contains a lipid matrix within which specific viral glycoproteins are imbedded.
  - These knob-like structures responsible for binding to target cell.

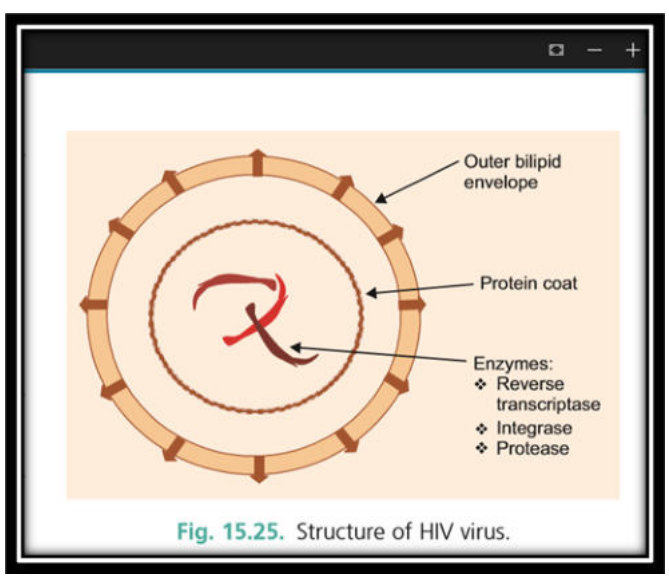
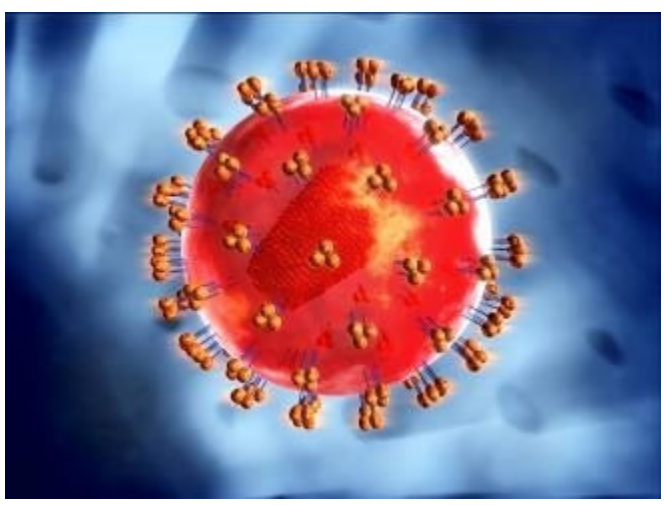
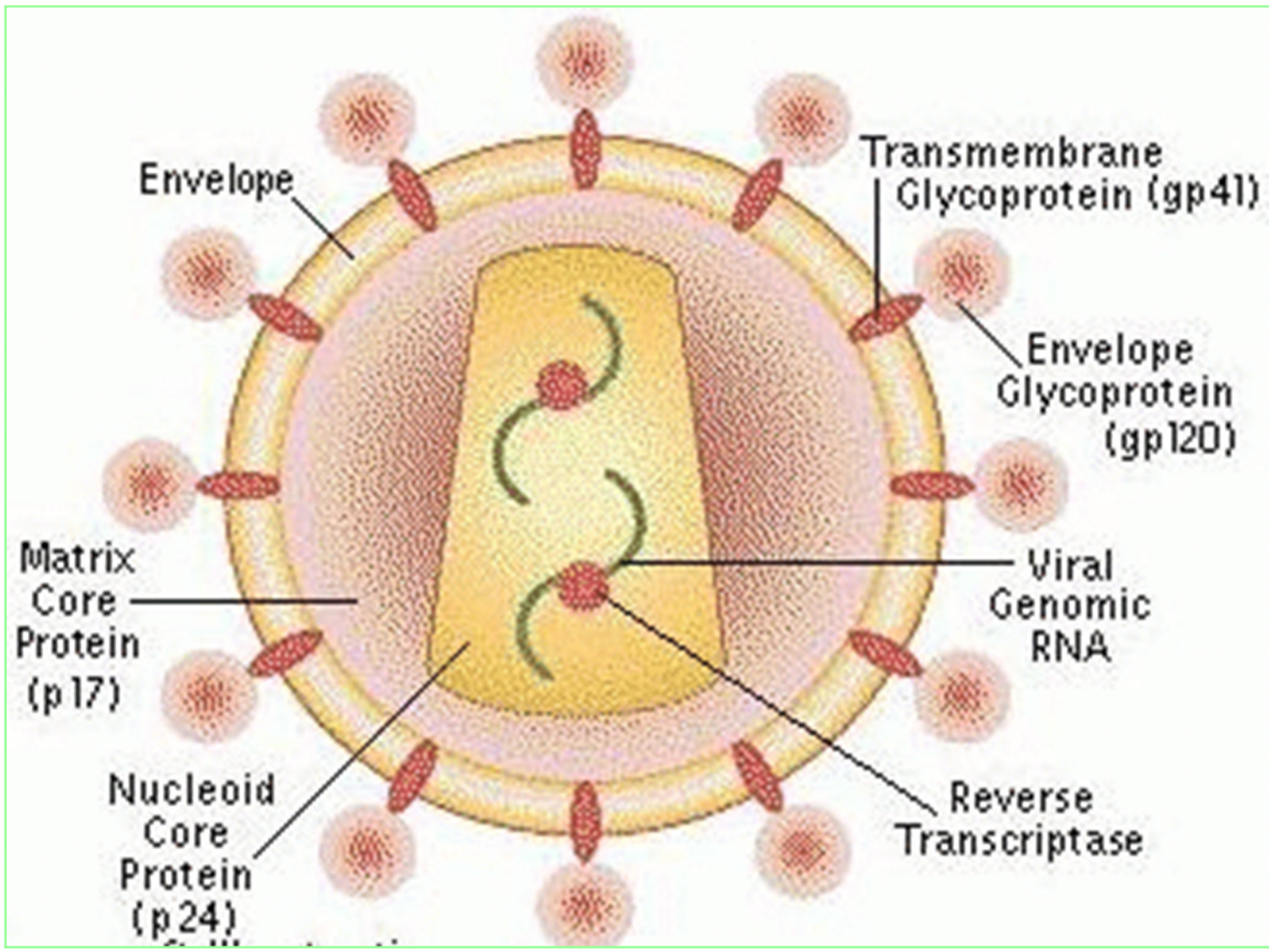


Fig. 15.25. Structure of HIV virus.



HIV STRUCTURE



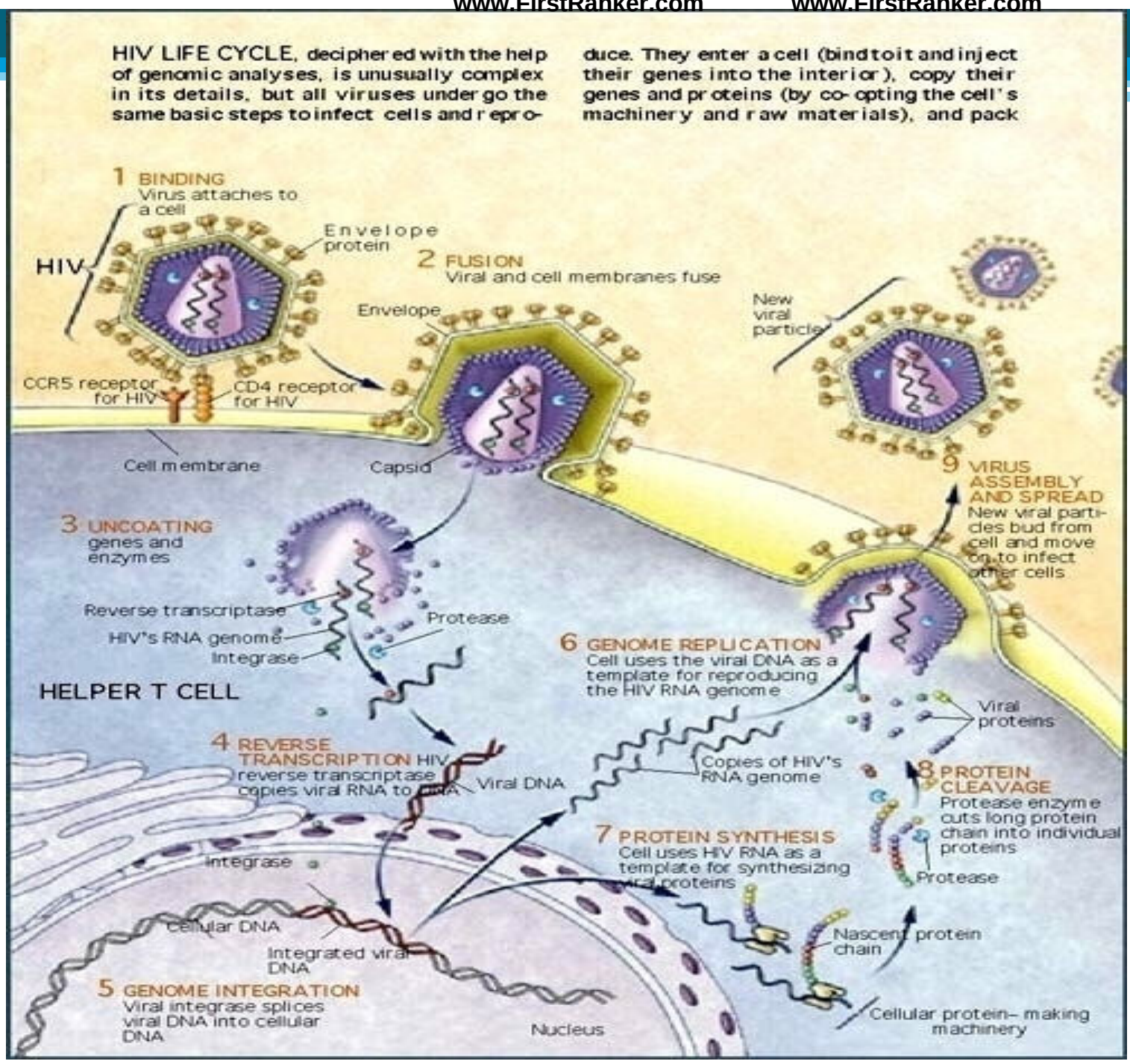
Structural Genes

- Three main structural genes:
  - **Group Specific Antigen (Gag)**
  - **Envelope (Env)**
  - **Polymerase (Pol)**

- Regulatory & accessory genes
- **Tat**
- **Nef**
- **Rev**
- **Vif**
- **Vpu/ vpx**
- **vpr**

Viral Replication

- First step, HIV attaches to susceptible host cell.
  - Site of attachment is the CD4 antigen found on a variety of cells
    - **helper T cells**
    - **macrophages**
    - monocytes
    - B cells
    - Microglial, glial cells
    - Alveolar macrophages
    - Langerhans cells



Disease progression in HIV-infected individuals

	Percentage to AIDS (%)	*Clinical latency*
Typical progressors	70–80	8–10 years
Rapid progressors	10–15	Absent/brief
Long-term non-Progressors	5	Indefinite
Long-term survivors	5	8–10 years*

*But remain clinically stable.

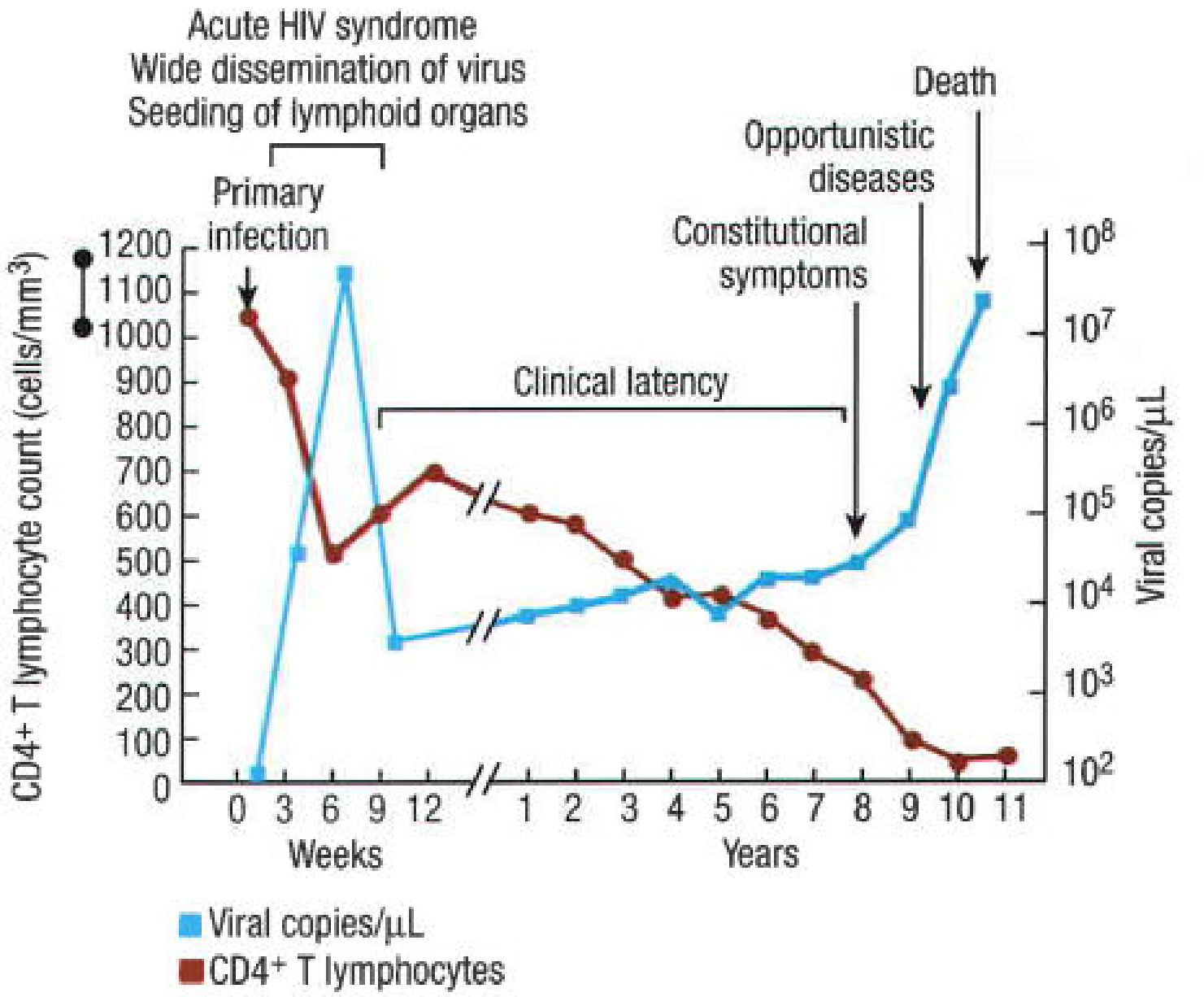
Natural History of HIV Infection

- 5 stages:
- Primary HIV infection: acute retroviral syndrome or be asymptomatic.
- Clinical stage 1: which may manifest as persistent generalized lymphadenopathy or be asymptomatic.
- Clinical stage 2: unexplained symptoms, infections, oral lesions or itchy dermatoses.
- Clinical stage 3: unexplained symptoms, infections, oral lesions itchy dermatoses or ‘penic’ hematological changes.

- Clinical stage 4: wasting disease, infections, neoplasms and neurological disease.

TABLE 198-1
Stages of Human Immunodeficiency Virus Disease

Stage and Clinical Features	Typical Duration	CD4+ Cell Range (Cells/μL)
Acute retroviral syndrome (brief mononucleosis-like illness)	1–2 wk	1000–500
Asymptomatic (no symptoms or signs other than lymphadenopathy)	> 10 yr	750–500
Early symptomatic (non–life-threatening infections, chronic or intermittent illness)	0–5 yr	500–100
Late symptomatic (acquired immunodeficiency syndrome; increasingly severe symptoms, life-threatening infections and cancers)	0–3 yr	200–50
Advanced (increasing risk of death, fewer transferable opportunistic infections)	1–2 yr	50–0



JRE 198-2 Typical disease course in an individual with human immunodeficiency virus (HIV) infec-
om Fauci A et al: Immunopathogenic mechanisms of HIV infection. *Ann Intern Med* **124**:654, 1996.)

TABLE 198-2
Laboratory Diagnosis of Human Immunodeficiency Virus (HIV) Infection[5]

TEST	COMPONENT TESTED		ROLE IN DIAGNOSIS
Enzyme-linked immunosorbent assay[a]	Antibodies (IgM and IgG)	3–6 wk	Screening
Antigen capture[b]	HIV p24 antigen	2–3 wk	Screening
Western blotting	Antibody (IgG)	3 wk	Confirmatory
Immunofluorescence	Antibody (IgG)	3 wk	Confirmatory
Nucleic acid testing	HIV RNA or DNA	2 wk	Confirmatory
Viral culture	Virus, usually from peripheral blood mononuclear cells, not serum or plasma	—	Confirmatory, research

Ig = immunoglobulin.
[a]Rapid tests as well as particle agglutination tests are also available.
[b]Detection can be increased with the use of immune complex dissociation techniques.
Modified from Maldarelli F: Diagnosis of human immunodeficiency virus infection, in *Principles and Practice of Infectious Diseases*, edited by Mandell GL et al. Philadelphia, Elsevier, 2005, p 1506, with permission.

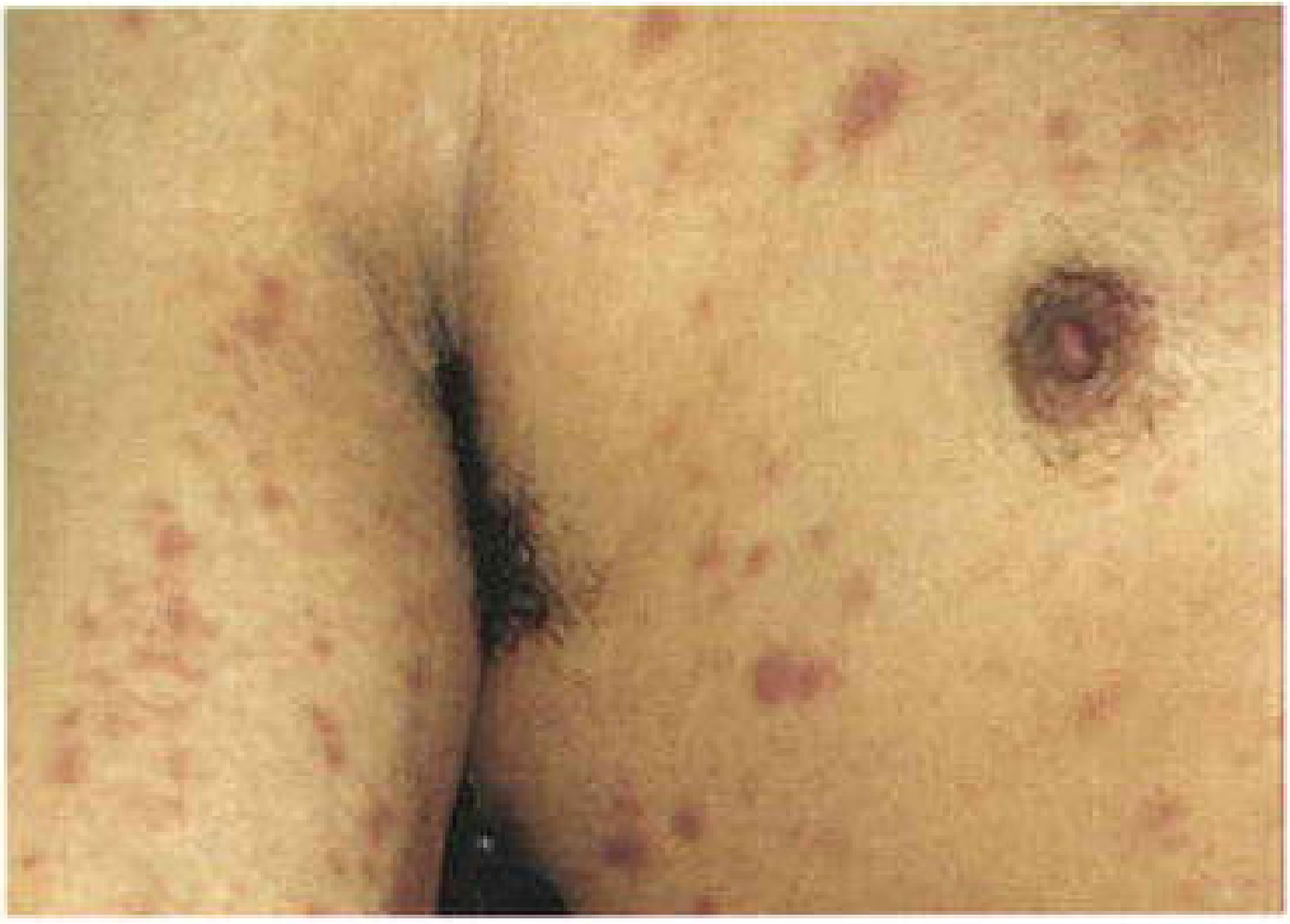
• MUCOCUTANEOUS MANIFESTATIONS OF HIV

TABLE 198-4

Mucocutaneous Disorders That Are Indications for Human Immunodeficiency Virus (HIV) Serotesting

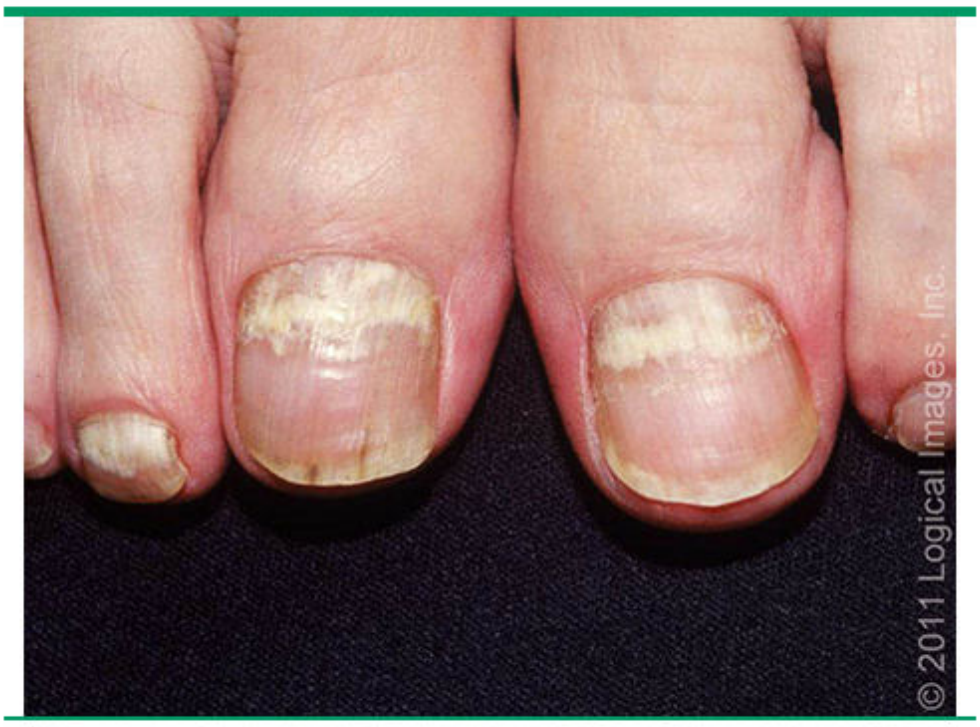
Highly indicative of HIV infection (correlated with risk factors for HIV infection)

- Exanthem of acute retroviral syndrome
- Proximal subungual onychomycosis
- Chronic herpetic ulcers
- Oral hairy leukoplakia
- Kaposi sarcoma
- Eosinophilic folliculitis
- Molluscum contagiosum, multiple facial lesions in adults



▲ **FIGURE 198-1** Acute retroviral syndrome: Exanthem. Discrete, erythematous macules and papules on the trunk and arm; associated findings were fever, scrotal ulcers, erythematous macules on the palate, and lymphadenopathy.

Proximal subungual onychomycosis



Whitish discoloration originating under the surface of the proximal nail plate is present.

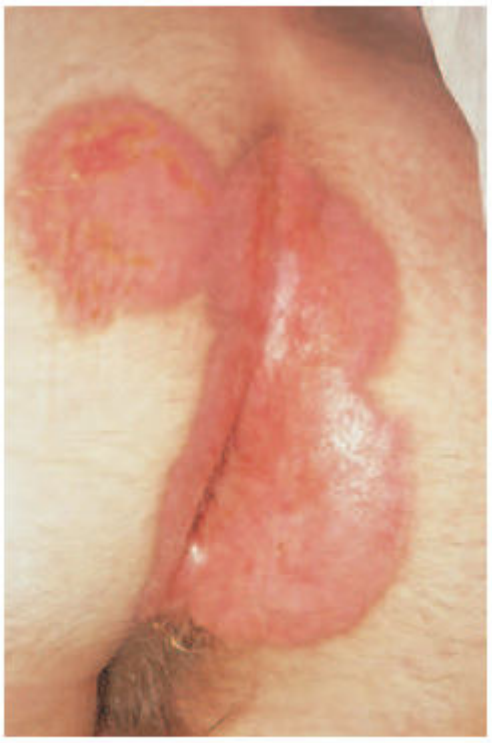
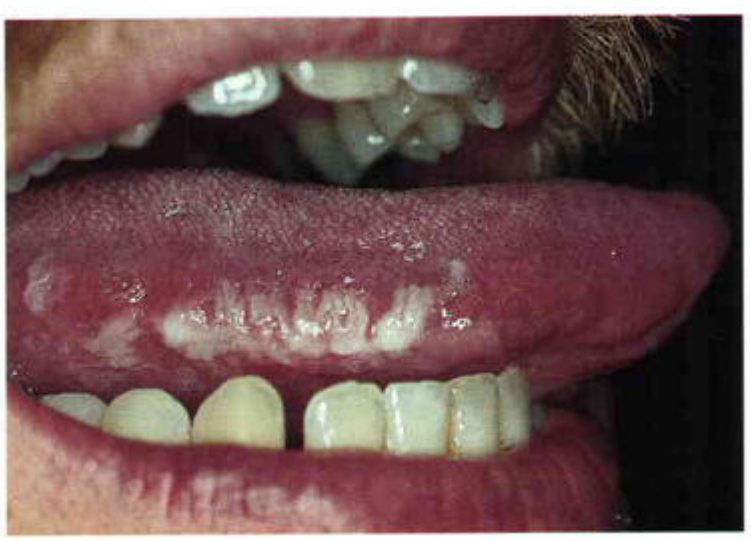
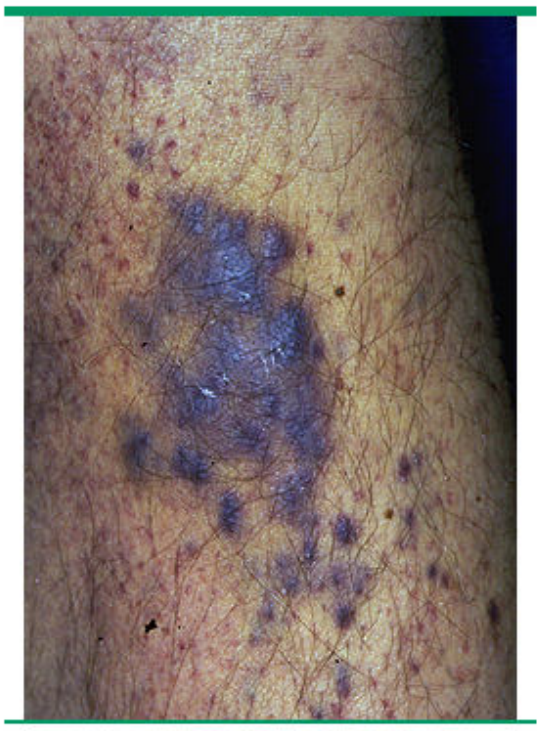


Fig. 26.9 Chronic perianal ulceration in herpes simplex infection before highly active antiretroviral therapy.

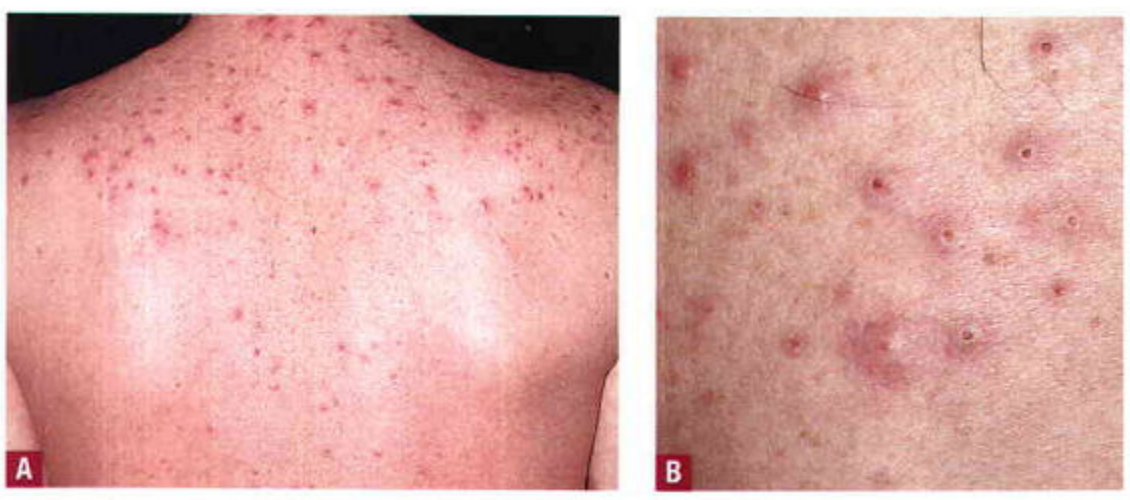


198-5 Oral hairy leukoplakia. White plaques with vertical corrugations on the inf

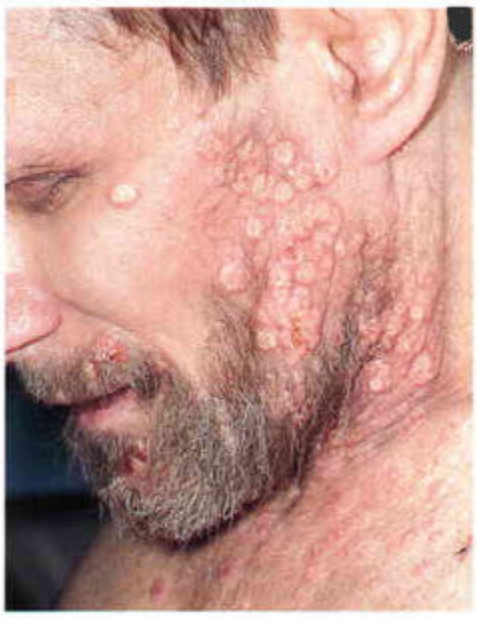
Follicular pattern in Kaposi's sarcoma



This central plaque is formed by a confluence of small lesions surrounded by papules on the thigh.



◀ **FIGURE 198-3** Eosinophilic folliculitis. **A.** Multiple erythematous pruritic papules on the trunk in an individual with a CD4 cell count of 50/μL. **B.** Close-up showing urticarial papules, pustules, and erosions secondary to rubbing and crusts.



▲ **FIGURE 198-12** Molluscum contagiosum virus infection. Before highly active antiretroviral therapy, multiple facial mollusca would enlarge to cause significant cosmetic disfigurement.

Strongly associated with HIV infection (correlated with risk factors for HIV infection)

- Any sexually transmitted disease (indicative of unsafe sexual practices)
- Herpes zoster
- Signs of injecting drug use
- Candidiasis: Oropharyngeal or recurrent vulvovaginal

May be associated with HIV infection (correlated with risk factors for HIV infection)

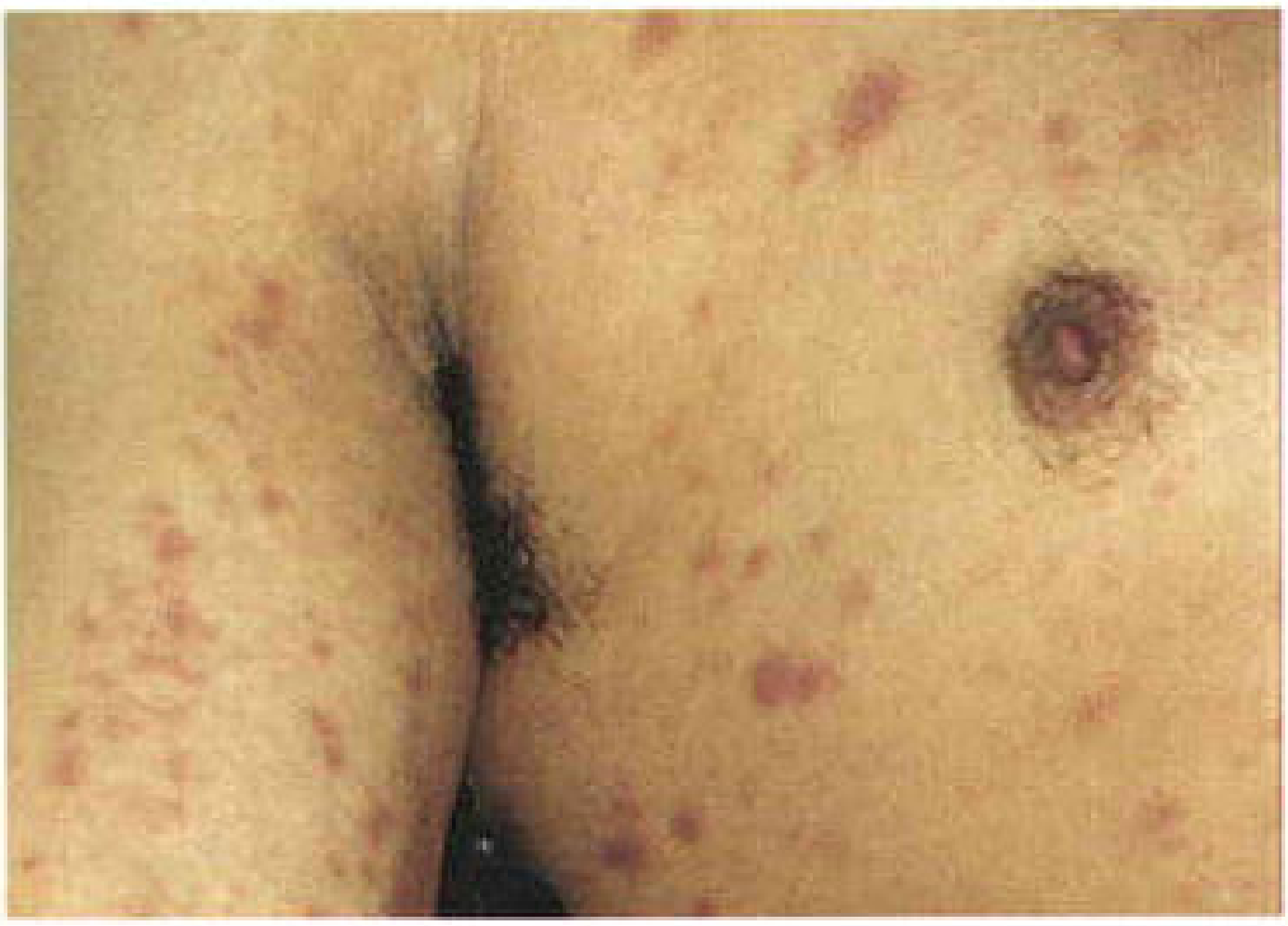
- Generalized lymphadenopathy
- Seborrheic dermatitis (extensive, refractory to therapy)
- Aphthous ulcers (recurrent, refractory to therapy)

Primary HIV infection/ acute retroviral syndrome (90% pts)

- Mononucleosis-like, occur 1 to 6 weeks after infection.
  - lymphadenopathy
  - Fever, Fatigue
  - Rash
  - Myalgia, arthralgia
  - pharyngitis
  - Headache,
  - Diarrhea, N, V
  - sore throat
  - neurologic manifestations.
  - Oral +/- genital ulcers

Table 26.11 Dermatological manifestations of HIV seroconversion. (After Bunker & Staughton [3].)

Exanthema
Enanthema
Urticaria
Toxic erythema
Erythema multiforme
Oropharyngeal candidosis
Acute genitocrural intertrigo
Oral ulceration
Genital ulceration



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- diagnosed by positive plasma HIV polymerase chain reaction (PCR) alongside negative or equivocal HIV antibody tests

Established HIV infection…. Pruritus, xerosis, ichthyosis

- common in HIV
- HIV – D/d of generalized pruritus
- mech-uncertain
- Severe intractable pruritus with eosinophilia

Pruritis and pruritic eruptions of HIV disease

Box 198-1

Differential Diagnosis of Pruritus in Human Immunodeficiency Virus (HIV)–Infected Individuals

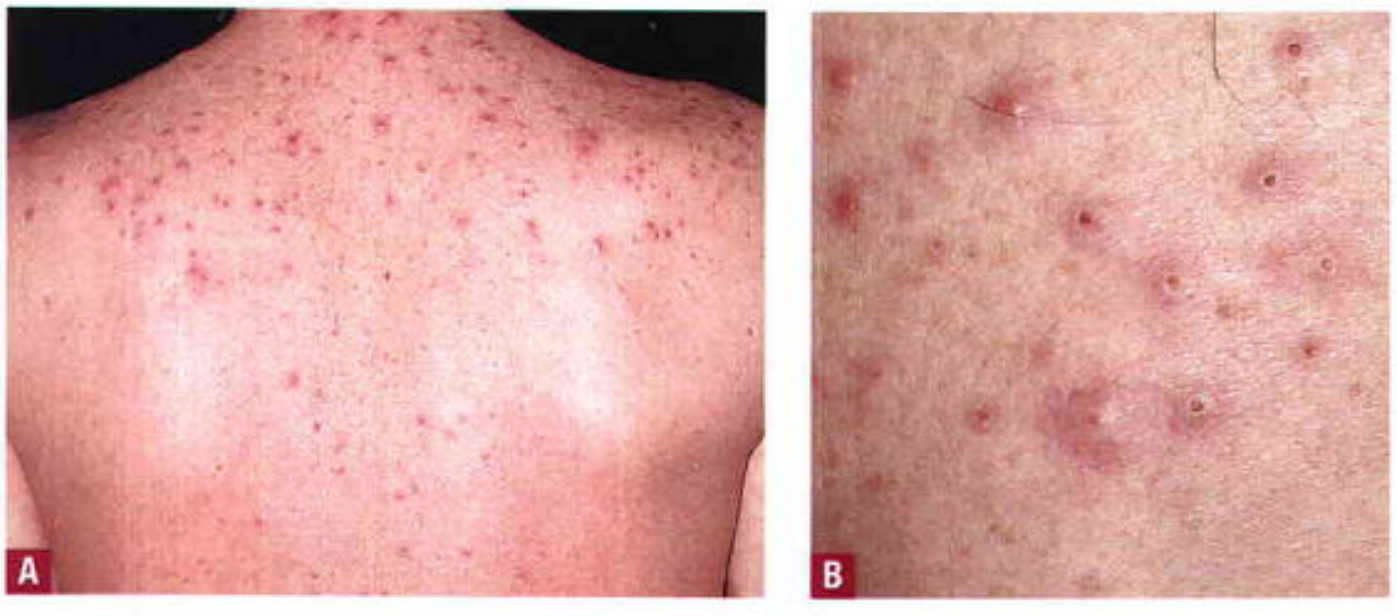
INFLAMMATORY DISORDERS
- Papular pruritic eruption of HIV
- Eosinophilic folliculitis
- Prurigo nodularis
- Atopic dermatitis
- Psoriasis
- Seborrheic dermatitis

INFECTIONS OR INFESTATIONS
- Scabies
- Arthropod assault
- Viral hepatitis

SYSTEMIC AND METABOLIC DISORDERS
- Renal failure
- Liver disease (viral, obstructive)
- Lymphoma

MISCELLANEOUS DISORDERS
- Xerosis
- Ichthyosis vulgaris
- Photodermatitis
- Dermographism
- Allergic contact dermatitis
- Adverse cutaneous drug eruptions

Eosinophilic folliculitis



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- chronic pruritic dermatosis occurring in persons with advanced HIV disease.
- small pink to red edematous, folliculocentric papules occur symmetrically above the nipple line on the chest, proximal arms, head, and neck.

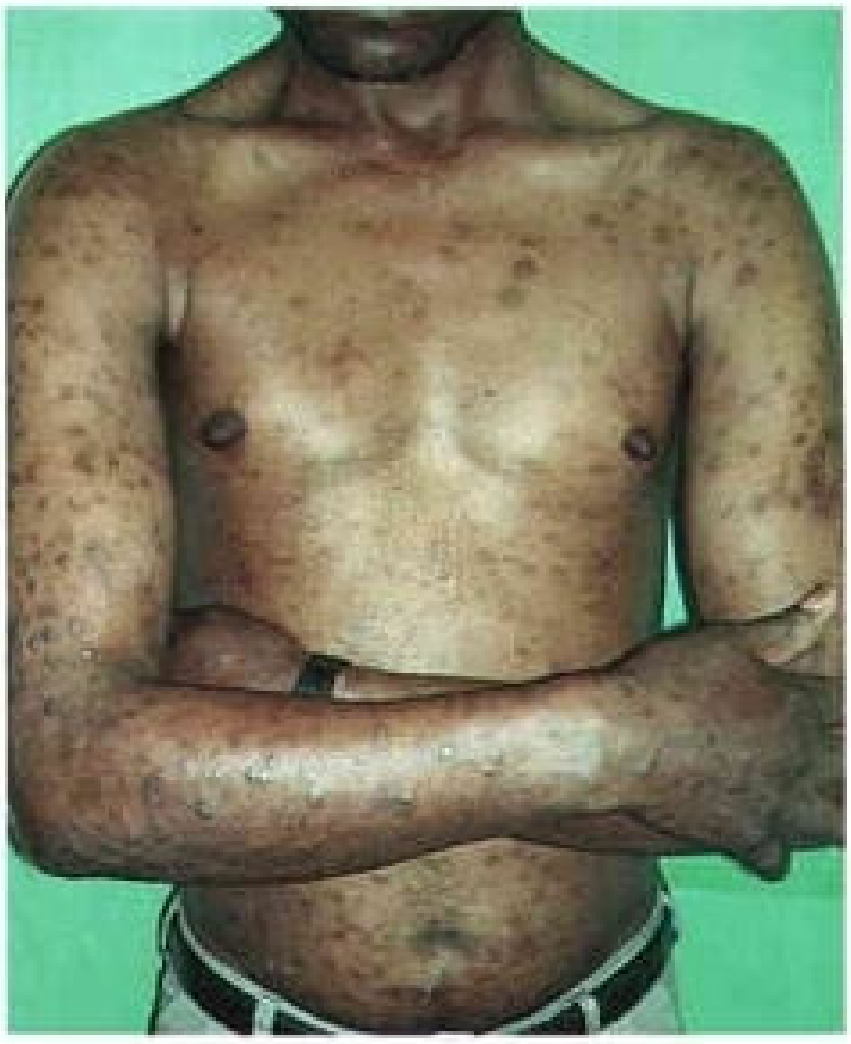
- Peripheral eosinophilia
- Smear from intact papule/ pustule– eosinophils

- Rx
- Phototherapy

- Sedating antihistamines

Papular pruritic eruption of HIV

- primary lesion- firm urticarial papule
- distributed symmetrically
- trunk and extremities and less commonly on the face
- occasionally folliculocentric



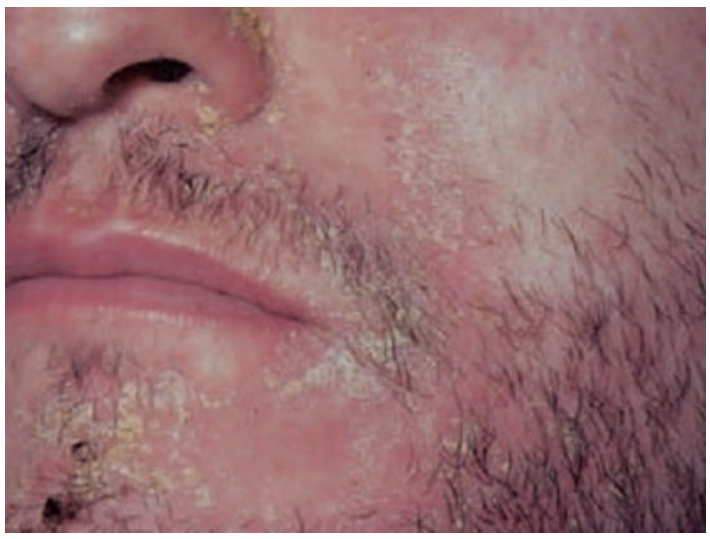
▲ **FIGURE 198-4** Papulopruritic eruption of human immunodeficiency virus infection. There are multiple, disseminated excoriated papules, post-inflammatory pigmentation, and small scars. The eruption is very pruritic. (Used with permission

- Insect bite hypersensitivity is a speculative pathomechanism
- PPE is a sign of an advanced degree of immunosuppression, occurring at CD4 T-cell counts below 100–200 × 10^6/L

- Moderately responsive to antihistaminics and steroids
- UV B phototherapy

Seborrhoeic dermatitis

- General population- 1-3%
- HIV- 20- 85%
- represents an aberrant cutaneous reaction to commensal Malassezia yeast species.



- Management follows conventional lines: emollients, topical steroids and antifungals and oral imidazoles.

Atopic dermatitis

- Patients with HIV infection commonly manifest atopic-like dermatitis & often have severe disease that is recalcitrant to therapy
- Explained by similar cytokine profile in both AD & HIV
- Th2 cytokine profile– elevated IgG levels, increased eosinophils, IL4 , IL5

- Treatment similar to immunocompetent hosts
- Effective anti retroviral therapy reduces the prevalence & severity of HIV related AD

Psoriasis

- Prevalence of psoriasis vulgaris & psoriatic arthritis – increased– 5% (1-2% in general population)
- The immune dysregulation resulting from HIV infection may trigger psoriasis in those genetically predisposed by the CW 0602 allele

Cutaneous infections associated with HIV/ AIDS….

- **Bacterial infections**
- Staphylococcus aureus –
- high rates of S.aureus infn
- atypical manifestations of the infection
- High rates of recurrent or chronic nasal carriage
- High rates of nosocomial infections/ deep tissue infection/ baceteremia- thru I/V lines

- Bullous impetigo,
- ecthyma,
- SSSS,
- plaque like folliculitis,
- pyomyositis,
- botryomycosis

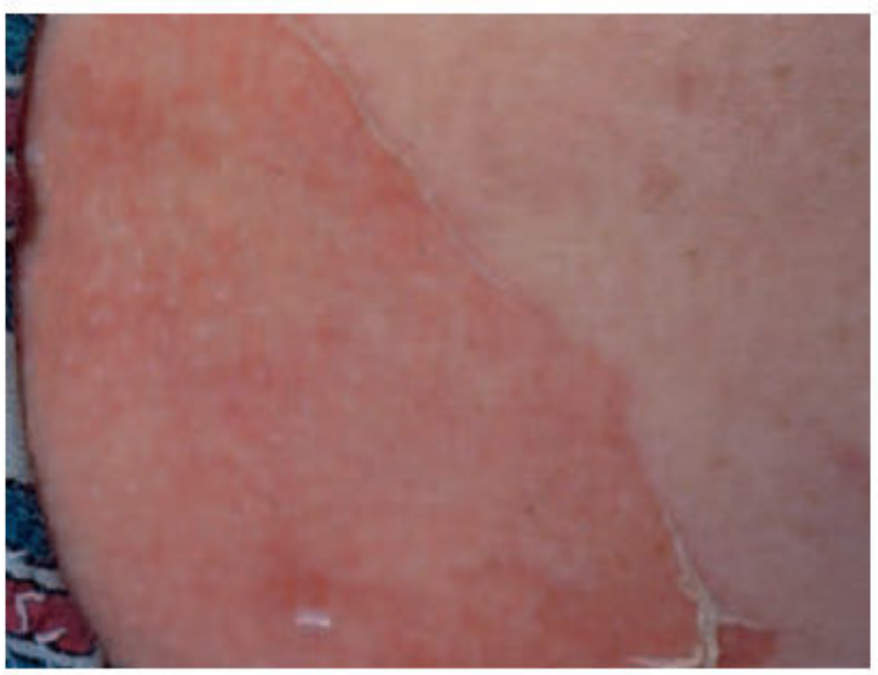
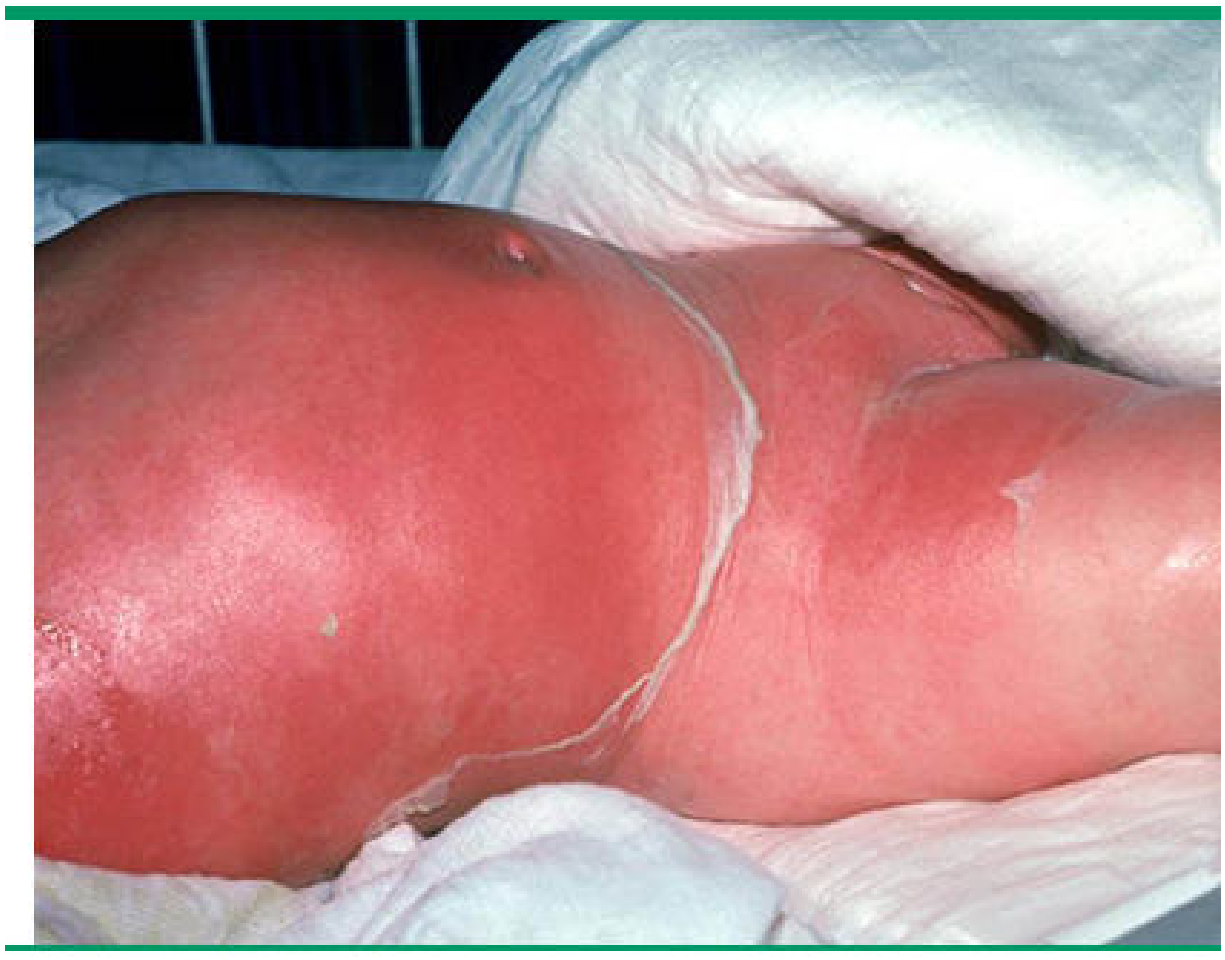


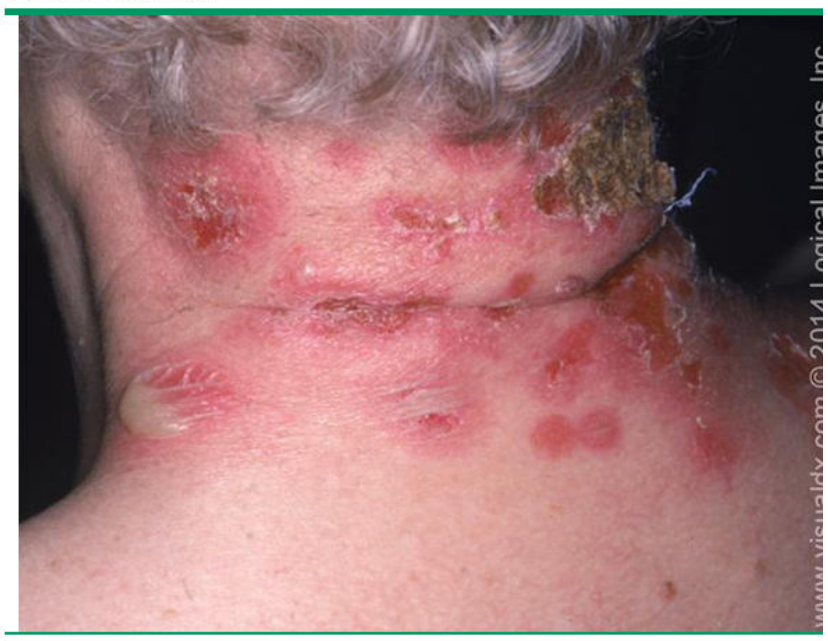
Fig. 26.6 Staphylococcal scalded skin syndrome: staphylococcal pneumonia in HIV-positive intravenous drug addict. (Courtesy

Staphylococcal scalded skin syndrome



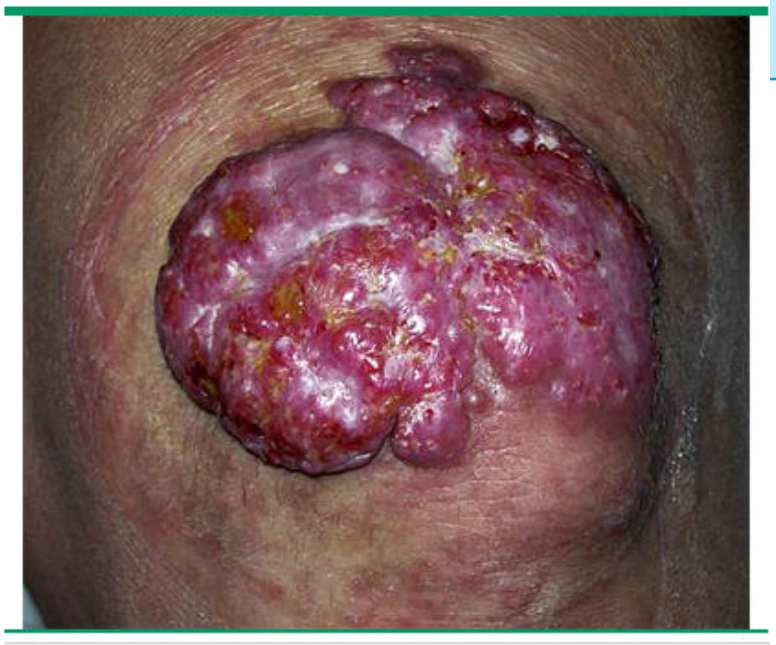
Diffuse erythema and desquamation are present in this child with staphylococcal scalded skin syndrome.

Bullous impetigo

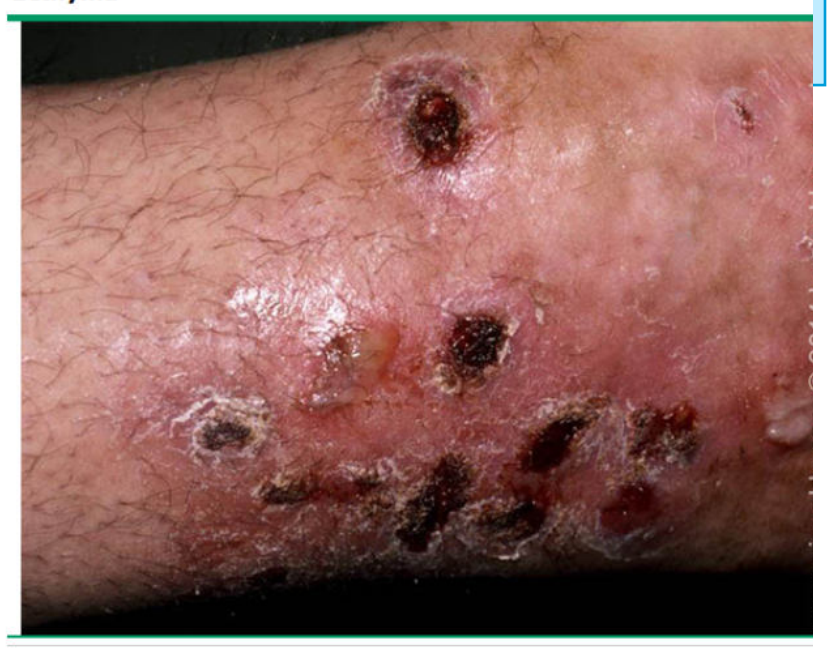


Bullae, erosions, and crusts in a patient with bullous impetigo on the neck.

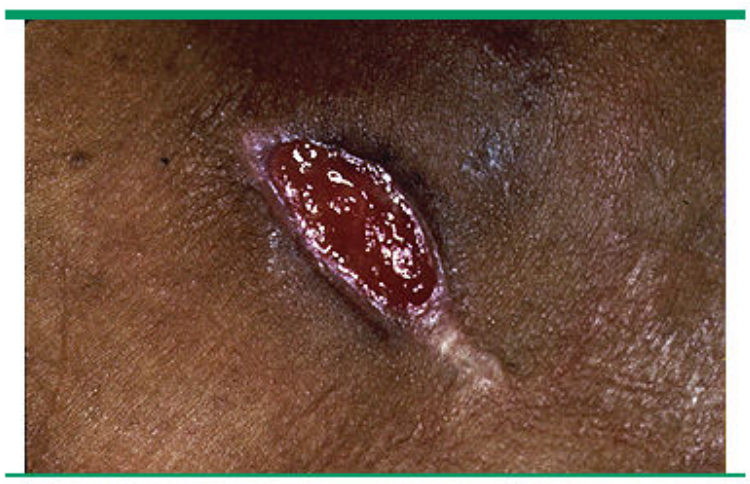
Botryomycosis lesion



Ecthyma



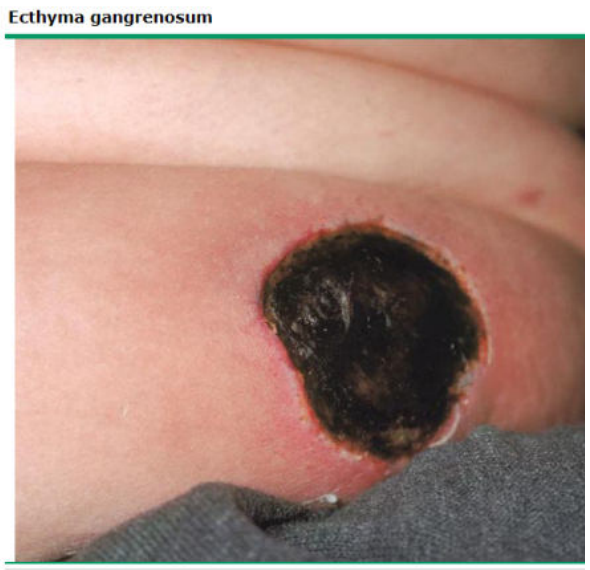
Insertion site infection due to staphylococcus aureus



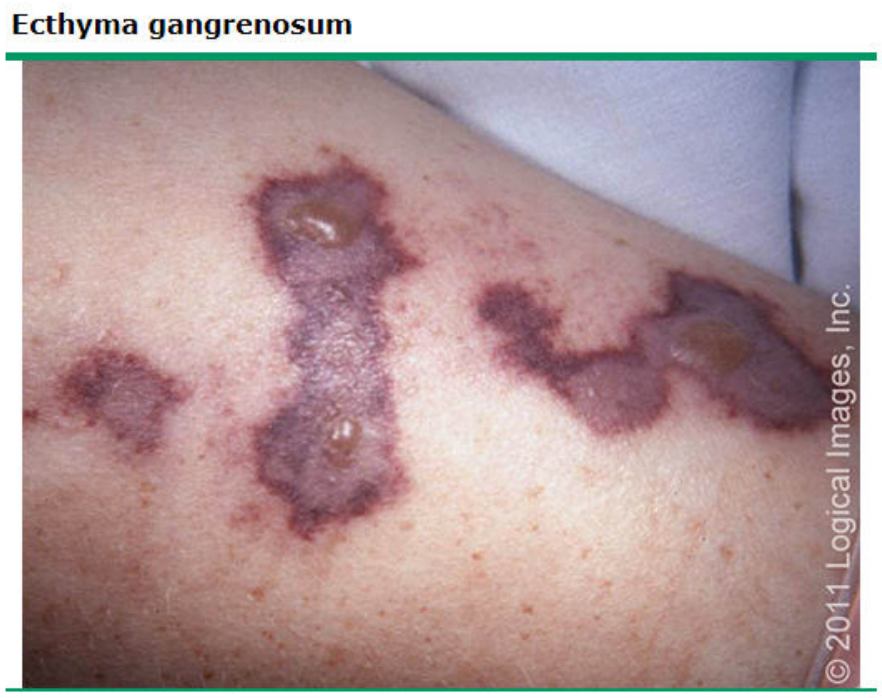
Breakdown of the skin with pus at the insertion site of a one-month old central venous catheter in an HIV-infected patient.

Psedomonas aeruginosa-

Ecthyma gangrenosum, panniculitis, septicemia



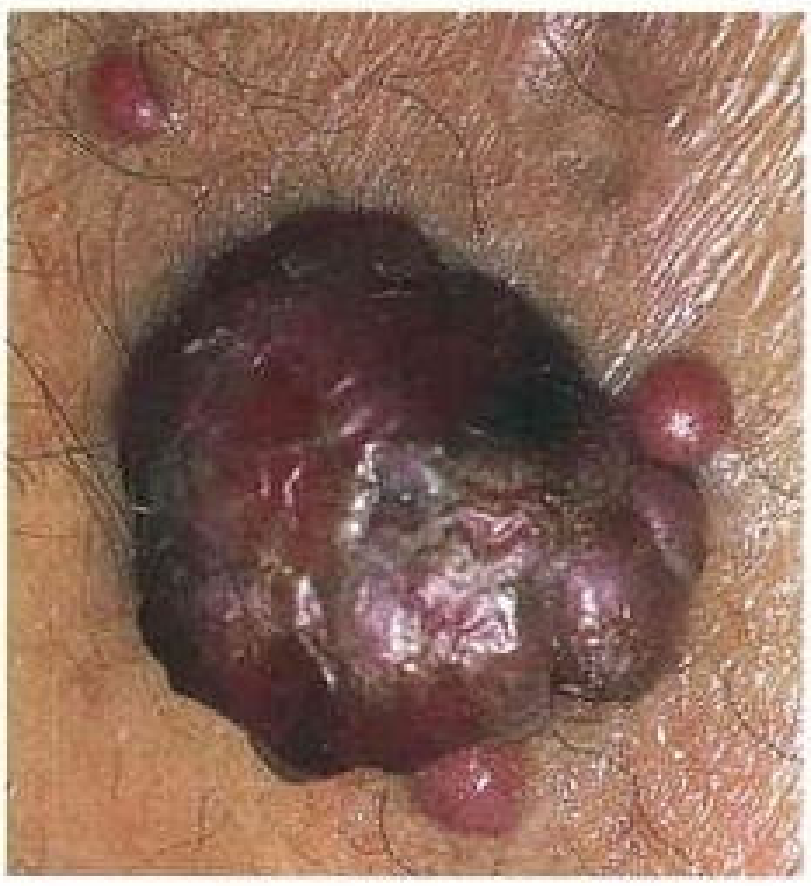
Necrotic eschar in ecthyma gangrenosum.



Retiform purpuric lesions in a patient with ecthyma gangrenosum.

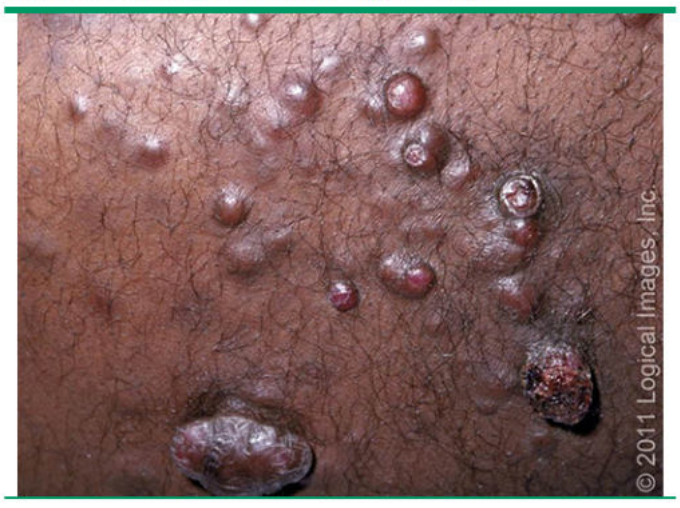
Bacillary angiomatosis-

- Bartonella hensalae, B quintana
- Angioproliferative lesions



▲ **FIGURE 198-9** Bacillary angiomatosis. Cherry hemangioma–like papules and a larger pyogenic granuloma–like nodule on the skin of a man with advanced human immunodeficiency virus disease. Subcutaneous nodular lesions were also present.

Cutaneous lesion of bacillary angiomatosis



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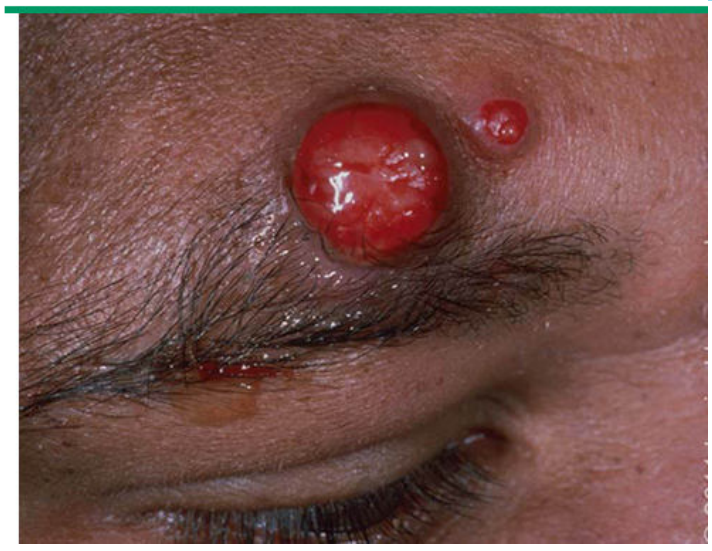


- Red to violaceous, dome shaped papules, nodules or plaques, few mm to 2-3cm in size
- Soft to firm
- May be tender to palpation

- Biopsy- vascular proliferation –prominent neutrophilic infiltrate.
- Warthin starry silver stain- for organism
- Immunoperoxidase stain- for organism

- Antibiotic of choice - erythromycin, doxycycline
- Rifampicin, ciprofloxacin, TMP -SMX

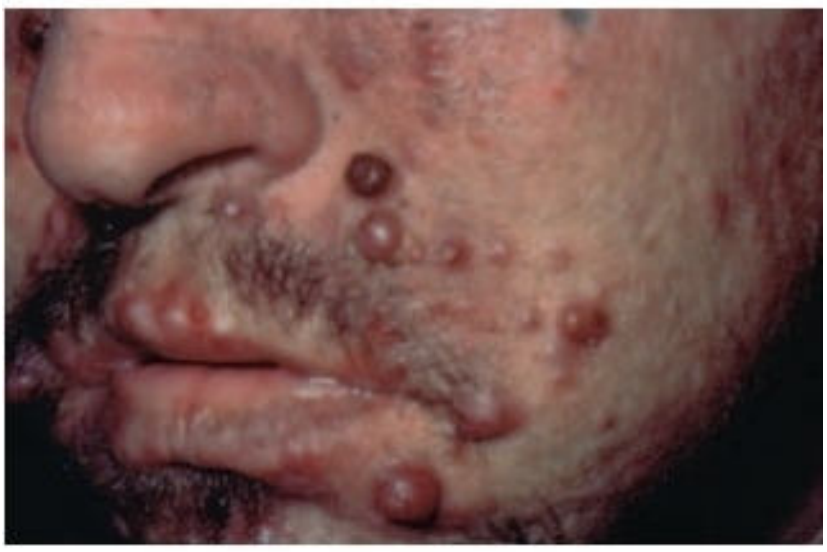


Fig. 26.7 Bacillary angiomatosis: purple nodules on the face.

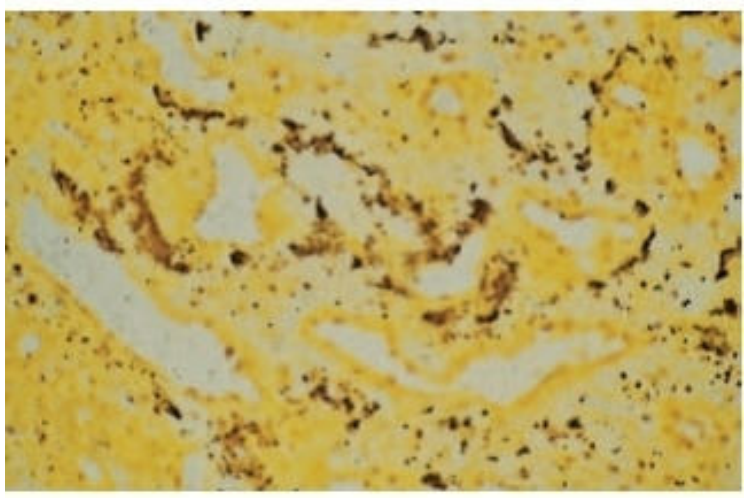


Fig. 26.8 Bacillary angiomatosis: Warthin–Starry silver staining of *Bartonella bacilliformis* and proliferative vascular channels. (Courtesy

- Mycobacterium tuberculosis
- Reinfection with, or reactivation of, Mycobacterium tuberculosis -occur early in HIV infection
- extrapulmonary, including cutaneous, tuberculosis is common and becoming commoner

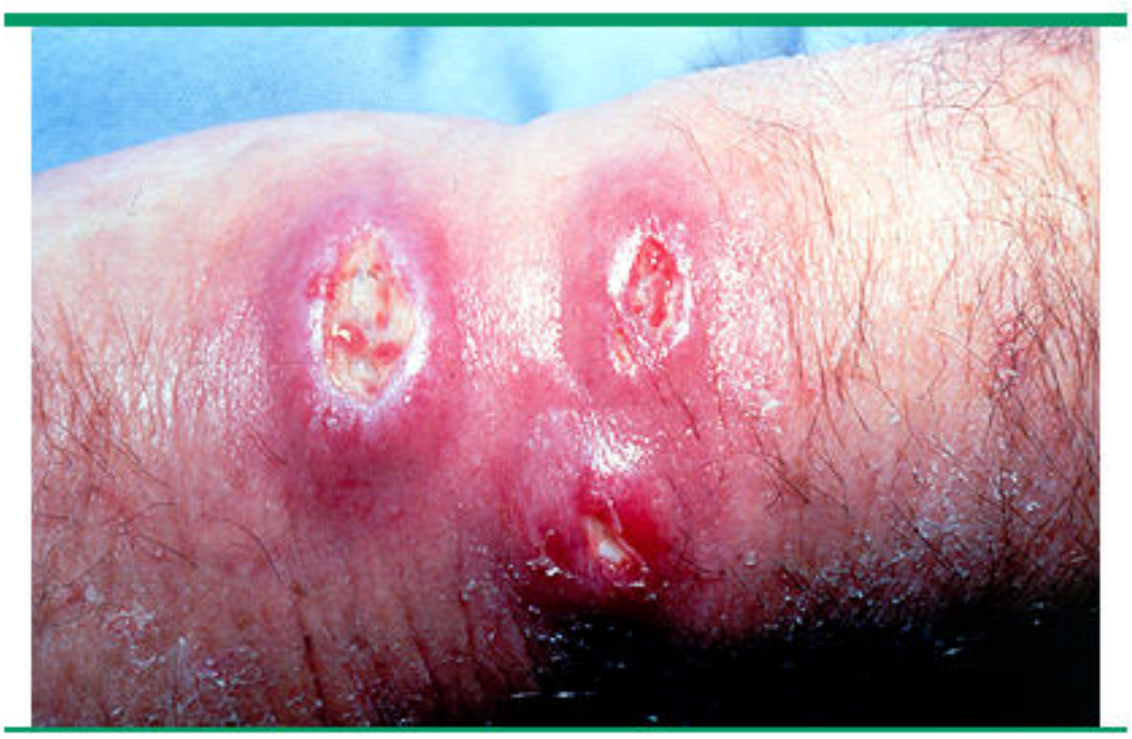
- Atypical mycobacterial skin disease- due to Mycobacterium avium–intracellulare.
- occcurs as part of a disseminated infection in up to one-third of patients at CD4 T-cell counts below 50 × 10^6/L (rare below 200 × 106/L).
- Lesions described include- violaceous papules, nodules and ulcers.

- M. kansasii, M. haemophilum , M. fortuitum and M. marinum- after primary infection of the skin by the organism

- characteristic histopathological features such as caseating granuloma may be absent due to diminished cell-mediated immunity

- Stain for AFB
- Mycobacterial culture

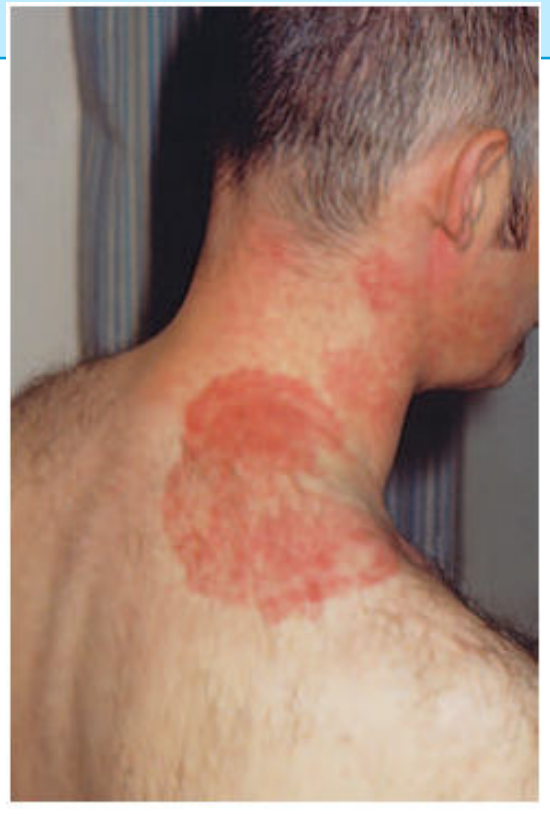
***Mycobacterium marinum* infection**



Ulcerative nodules on the arm.

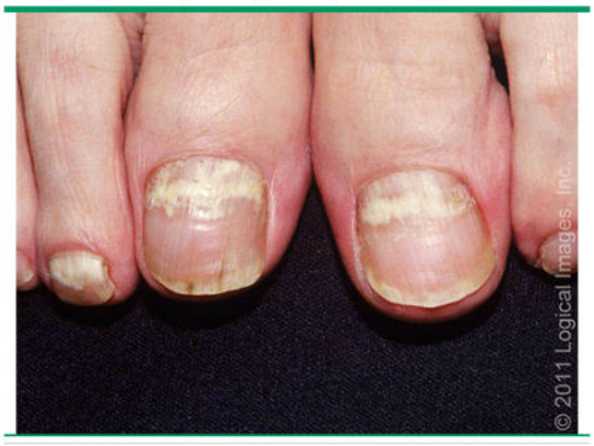
Fungal infections

- Dermatophytosis:
- Extensive in HIV disease
- Chronic & recurrent
- Proximal subungual onychomycosis- T rubrum



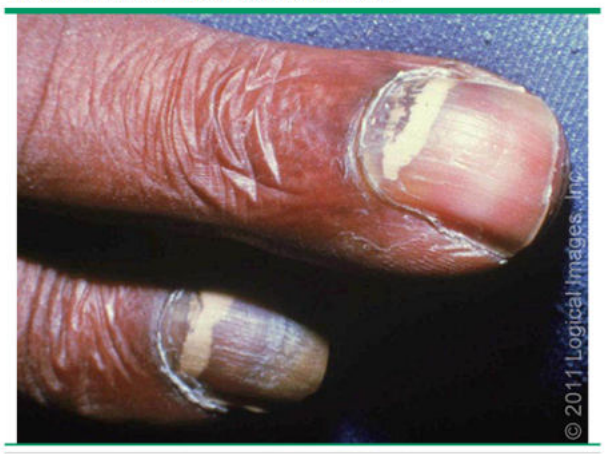
6 Tinea corporis and faciei. (Courtesy of Dr C.B. Bur

Proximal subungual onychomycosis



Whitish discoloration originating under the surface of the proximal nail plate is present.

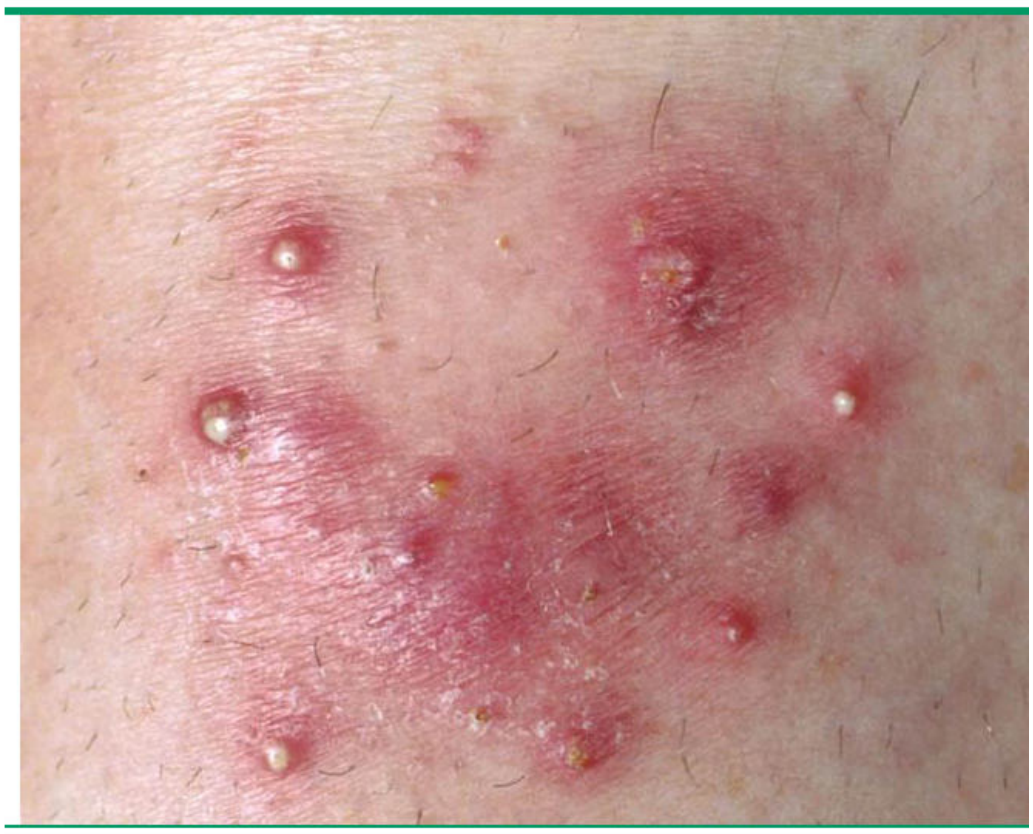
Proximal subungual onychomycosis



Whitish discoloration originating under the surface of the proximal nail plate is present.

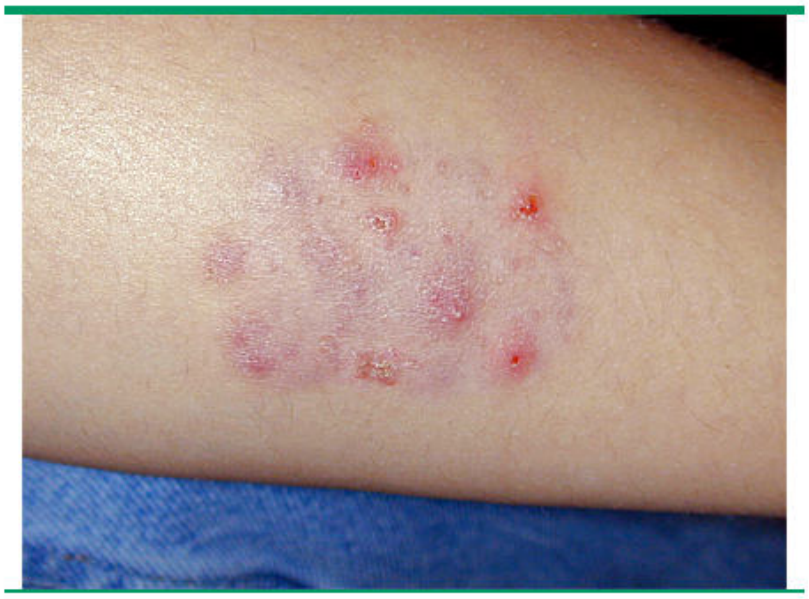
- Majocchi’s granuloma- nodular granulomatous perifolliculitis – firm violaceous nodules & papules – atypical manifestation of T.rubrum

Majocchi's granuloma



Papular and pustular eruption on the extremity secondary to dermatophyte infection.

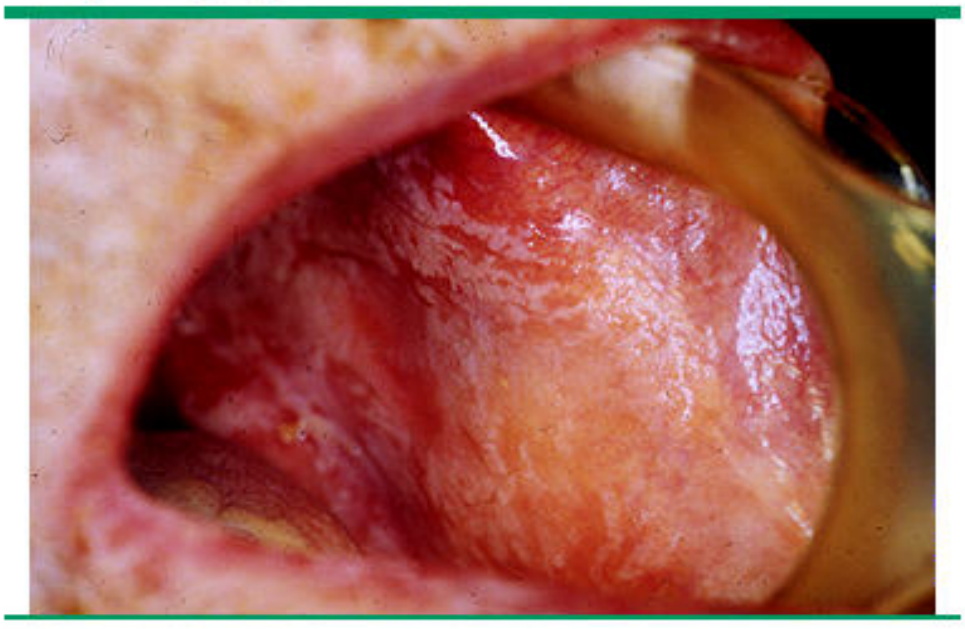
Majocchi's granuloma



A 14-year-old boy with tinea pedis developed a pruritic eruption of erythematous papules and small pustules on the leg that progressed after topical corticosteroid use.

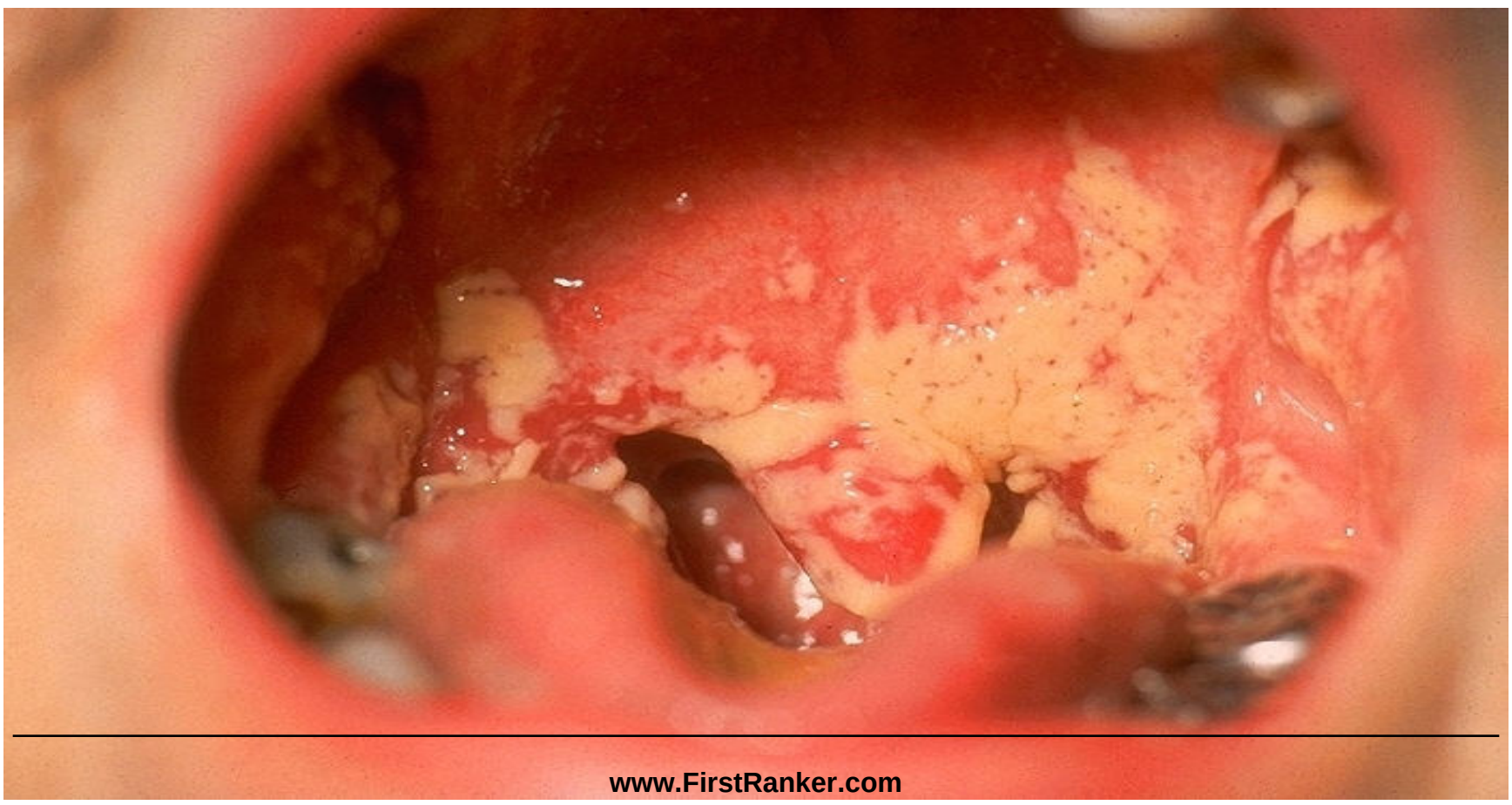
- Mucocutaneous candidiasis:
- Pseudomembranous oral candidiasis (thrush)
- Erythematous / atrophic candidiasis
- Angular cheilitis
- Vaginal candidiasis
- Oesophageal candidosis- an AIDS-defining diagnosis.

Oropharyngeal candidiasis

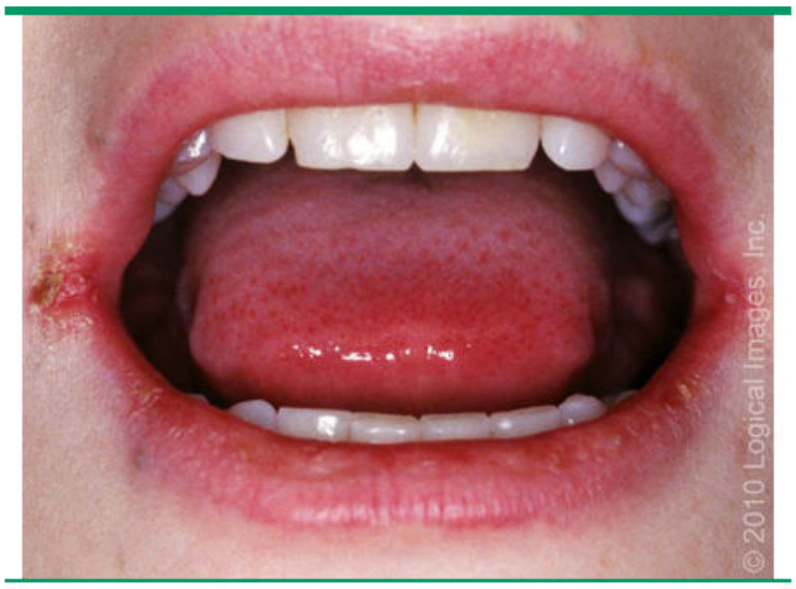


The buccal mucosa is involved here in the pseudomembranous form of oropharyngeal candidiasis.

Oral Candidiasis (thrush)

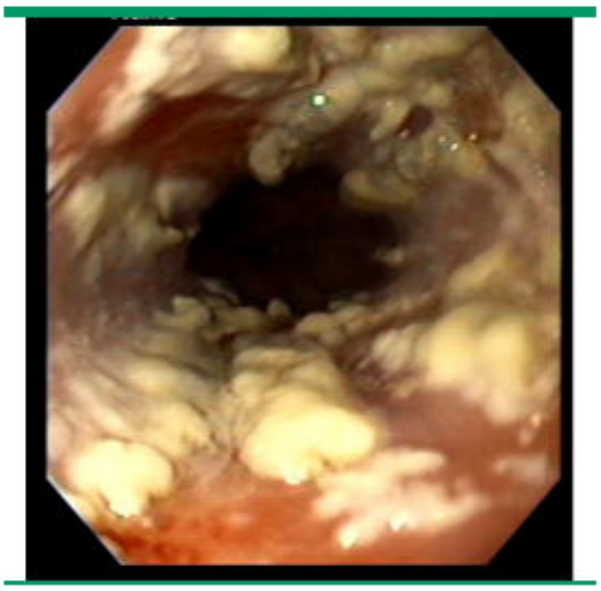


Angular cheilitis



Erythema and fissures are present at the corners of the mouth.

***Candida* esophagitis**

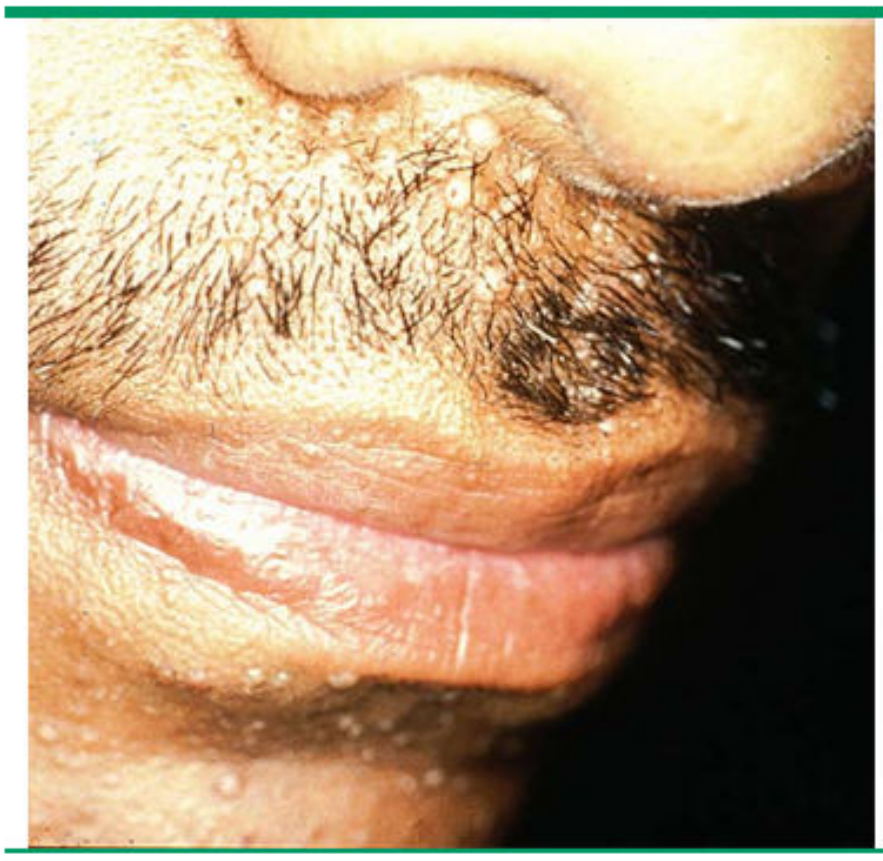


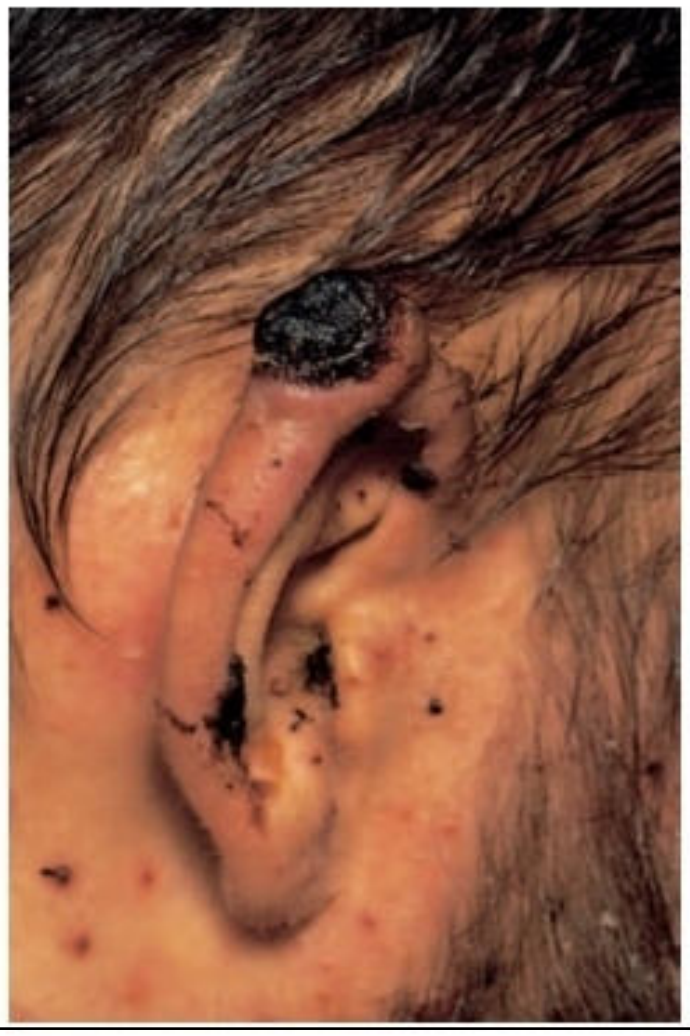
Endoscopic evaluation of the esophagus revealed an erythematous mucosa covered with white plaque-like lesions through the esophagus.

- Cryptococcosois:
- Most common invasive fungal infection in HIV patients
- CD4 counts < 100/ul
- Soil, pigeon species, eucalyptus
- Inhalation
- 10-20% have skin lesions

- Metastatic cutaneous cryptococcosis- AIDS defining illness
- Poor prognosis
- Most often- MC like umbilicated papules & nodules
- Necrotising papules & nodules
- Cellulitis, erythematous papules, nodules, pustules, ulcers

Cryptococcal papular skin lesions





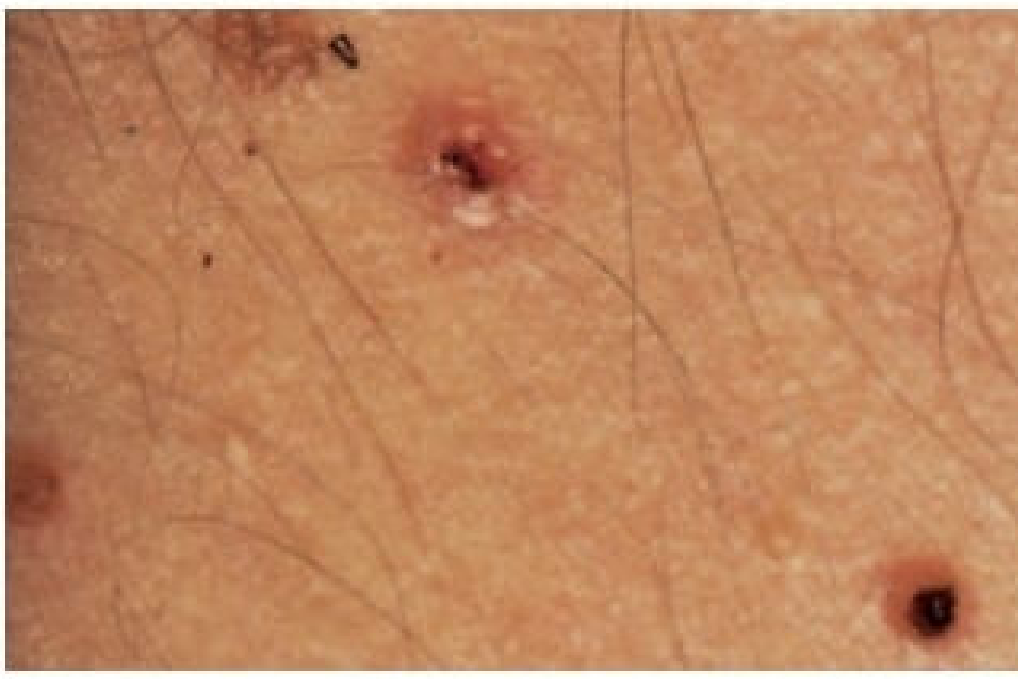
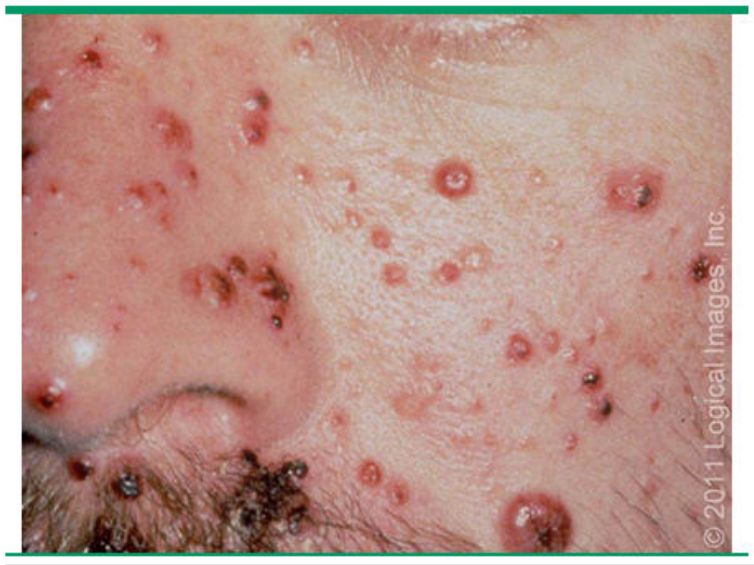


Fig. 26.18 Cryptococcosis: necrotizing papules. (Courtesy of

26.17 Cryptococcosis: necrotizing papules and nodules on

Disseminated cryptococcosis

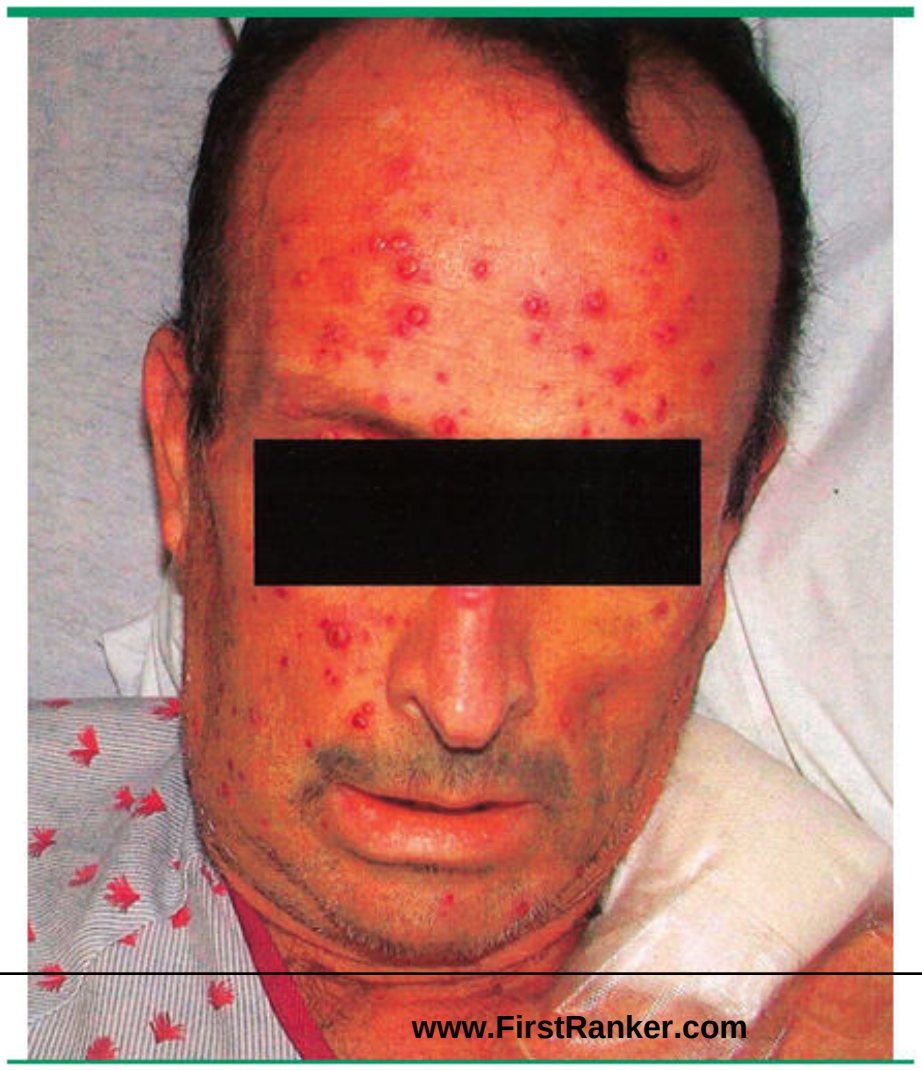


Multiple umbilicated papules are present on the face of this patient with cryptococcosis. The lesions resemble molluscum contagiosum.

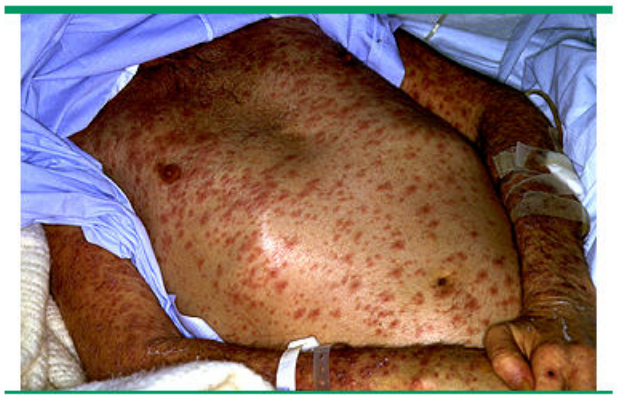
- Histoplasmosis:
- an AIDS-defining illness.
- a travel history- eastern US, latin America, sub saharan Africa, East Asia

- Disseminated histoplasmosis- skin involvement in 10% of patients.
- An exanthem, lesions resembling molluscum contagiosum, acneiform folliculitis,psoriasiform eruptions

Multiple monomorphic, dome-shaped papules and nodules that appeared on the head and neck



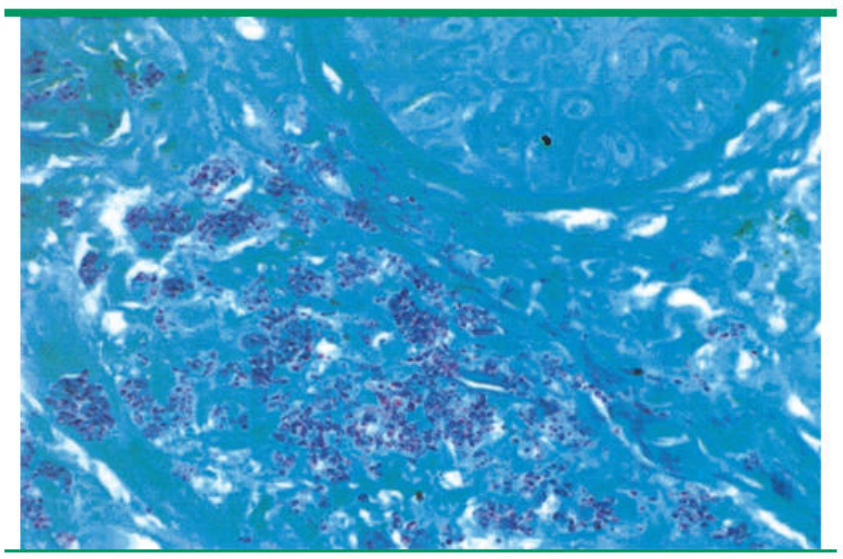
Disseminated histoplasmosis in a patient with AIDS



Generalized maculopapular eruption and vesiculopustules resemble varicella zoster virus infection.

- Gomori methenamine silver stain of a skin biopsy section.

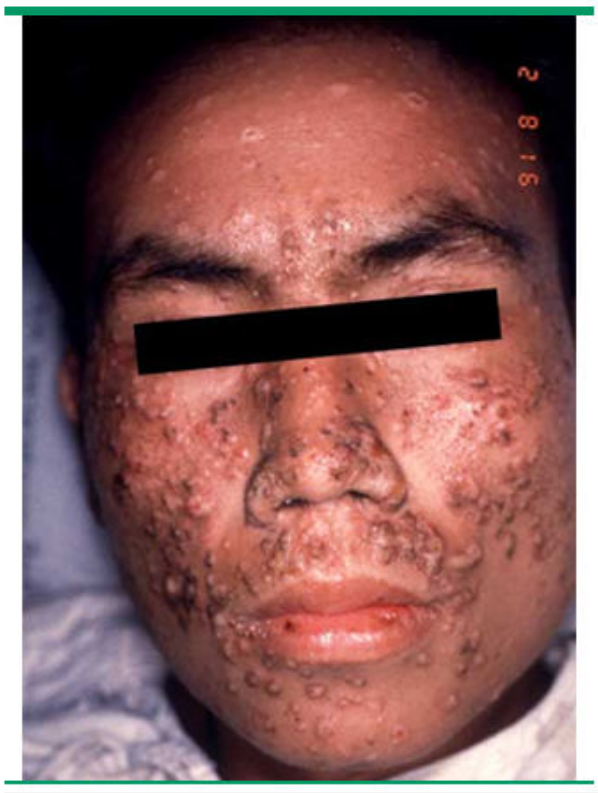
Biopsy specimen from a facial lesion (gomori methenamine silver stain; original magnification, x600)



- Penicillinosis:
- Dimorphic fungi- penicillium marneffei
- 3rd most common opportunistic infection after TB & cryptococcosis
- Soil
- Inhalation of conidia
- Cutaneous lesions- 75% pts

- Umbilicated papules with a necrotic central pore
- Ecthyma-like, folliculitis, subcutaneous nodules, morbilliform eruption
- Face & neck

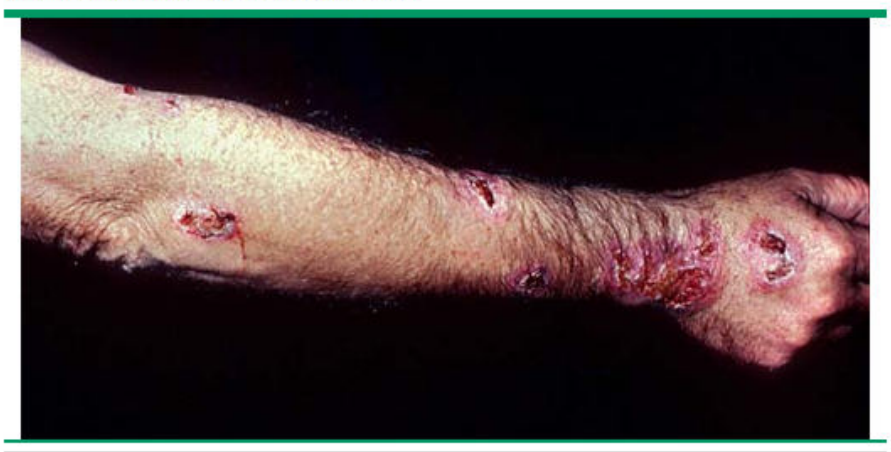
Penicillium marneffei in an AIDS patient



Cutaneous lesions resulted from the dissemination of the fungus fro the lungs. The patient's underlying disease is AIDS.

sporotrichosis

Skin lesions sporotrichosis



Viral infections

- Herpes simplex virus I & 2
- HSV lesions tend to be chronic, indolent & atypical
- Respond less promptly to antiviral therapy

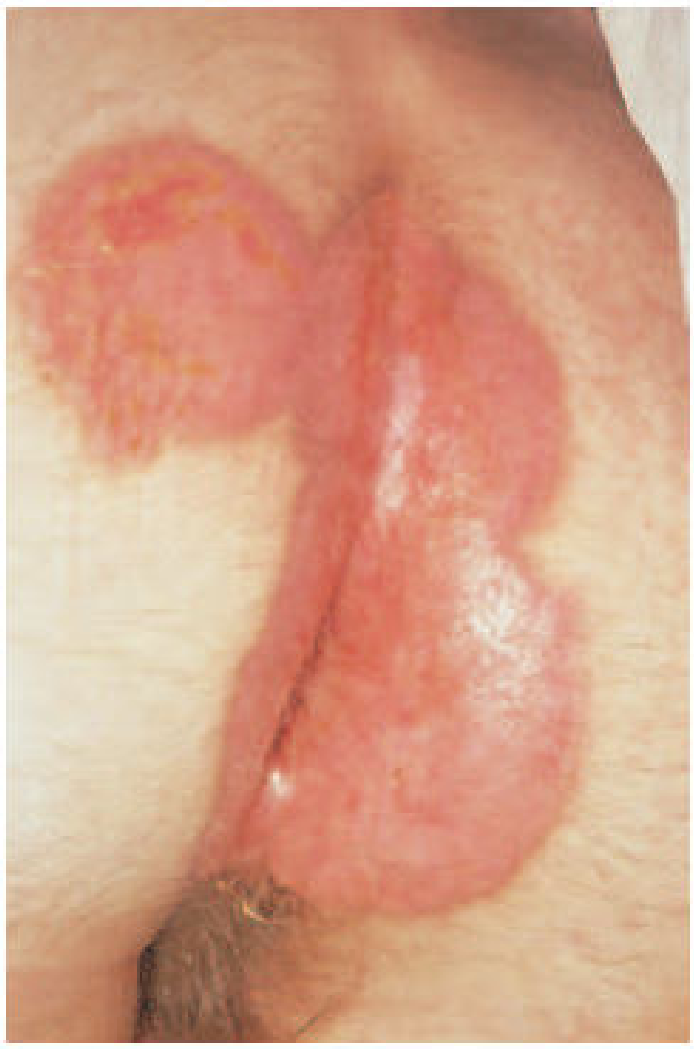
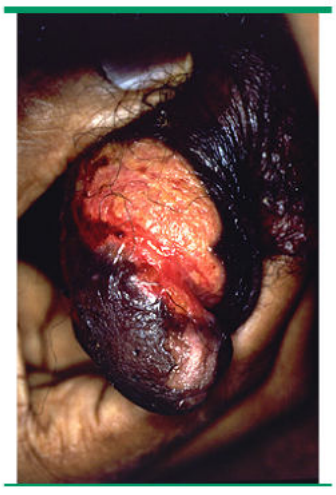


Fig. 26.9 Chronic perianal ulceration in herpes simplex infection before highly active antiretroviral therapy.

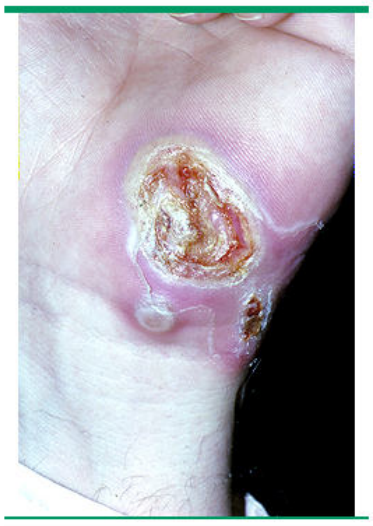
- Anogenital involvement is frequent
- Any site can be affected- vesicobullous– eroded, crusted, vegetative , ulcerating
- May not be self limiting

▲ **FIGURE 198-10** Chronic herpetic lesions. Chronic ulcers and ulcerated tumor on the penis, scrotum, and pubic area in a patient with human immunodeficiency virus disease. The herpes simplex virus was acyclovir resistant, and lesions resolved after treatment with topical cidofovir.

Chronic herpes simplex in HIV



Ulcer and vesicle in chronic herpes simplex



Persistent ulcer of the wrist with surrounding vesicular lesion in an HIV-infected patient.

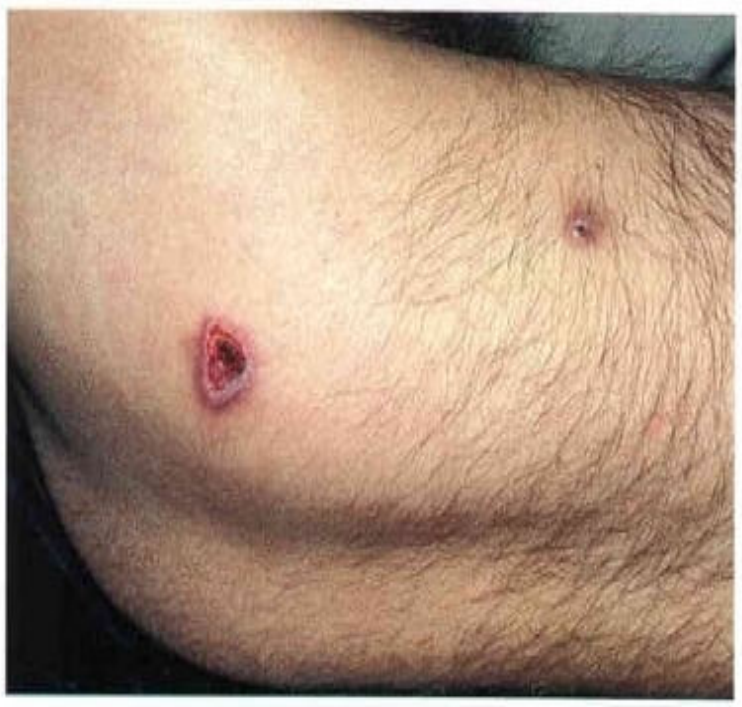
Chronic herpes simplex of the ear and neck

Extensive lesion with ulceration involving the posterior ear and neck due to herpes simplex in a patient with HIV.

- Chronic herpetic ulcers of longer than 1 month duration- AIDS defining illness
- Persistent necrotic digits & perioral ulceration
- Foscarnet & cidofovir – i/v – if Acyclovir resistant

- Varicella zoster virus infection:

- Severe varicella
- Persistent varicella
- Disseminated HZ
- Chronic or reccurent HZ



▲ FIGURE 198-11 Varicella-zoster infection: Ulcerated, ecthymatous lesions. Two ulcerated, crusted, painful lesions in the trochanteric region and the lateral thigh had been present for 9 months and resolved with oral acyclovir therapy.

- Molluscum contagiosum

- 10% HIV Pts
- 30% of those with CD4< 100 cells/ul
- Progressive & recurrent

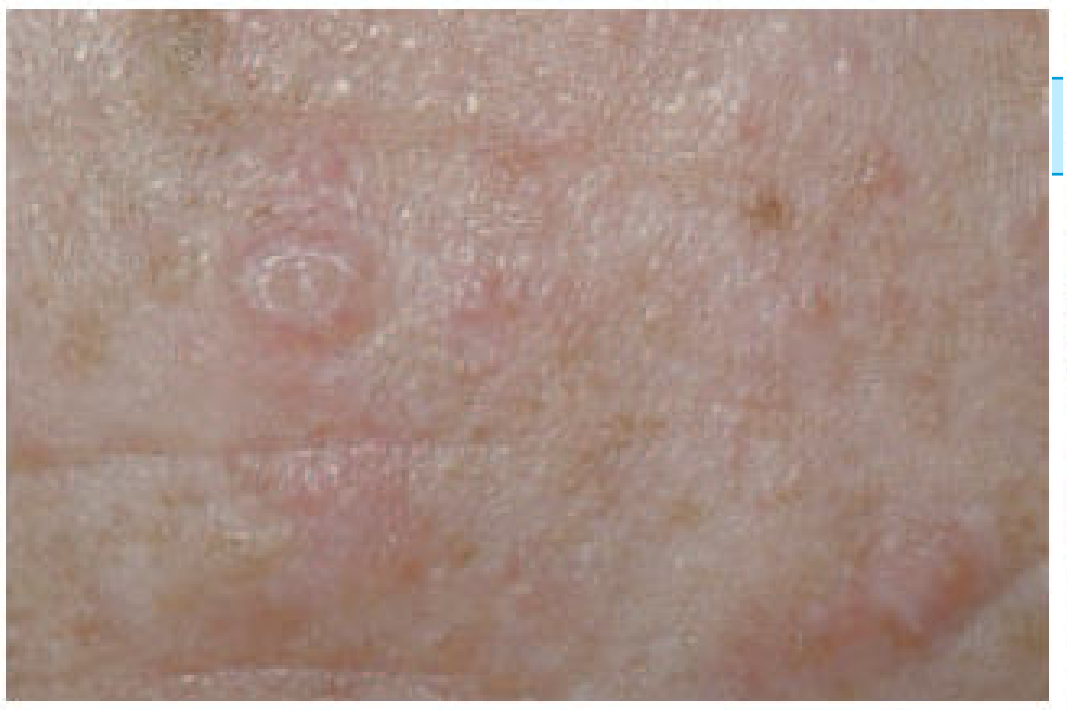
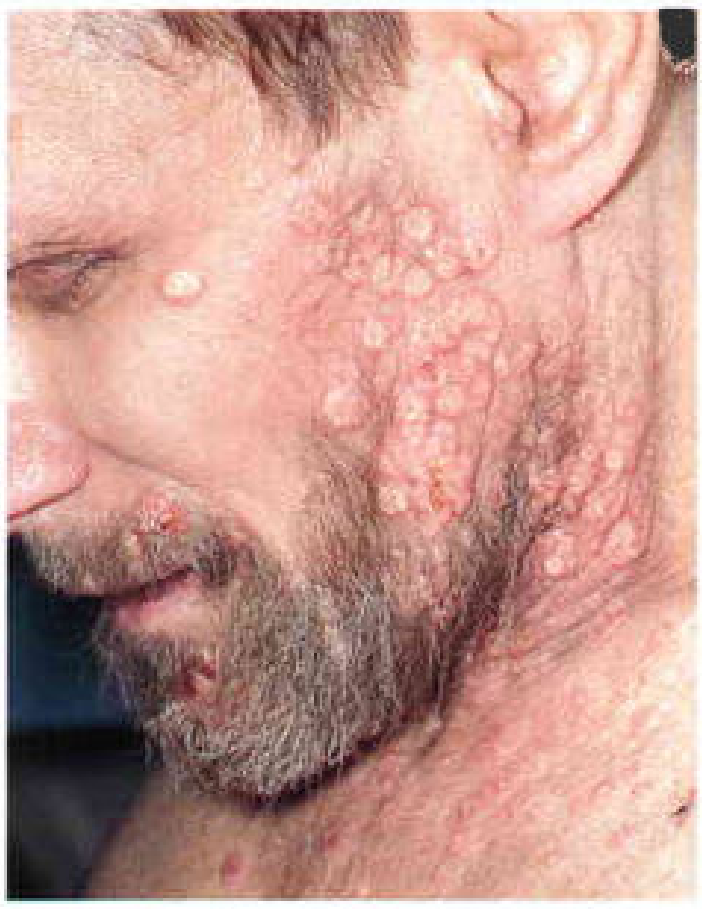


Fig. 26.15 Atypical mollusca: flesh-coloured papules and nodules on the forehead. (Courtesy of Dr C.B. Bunker and Media Resources

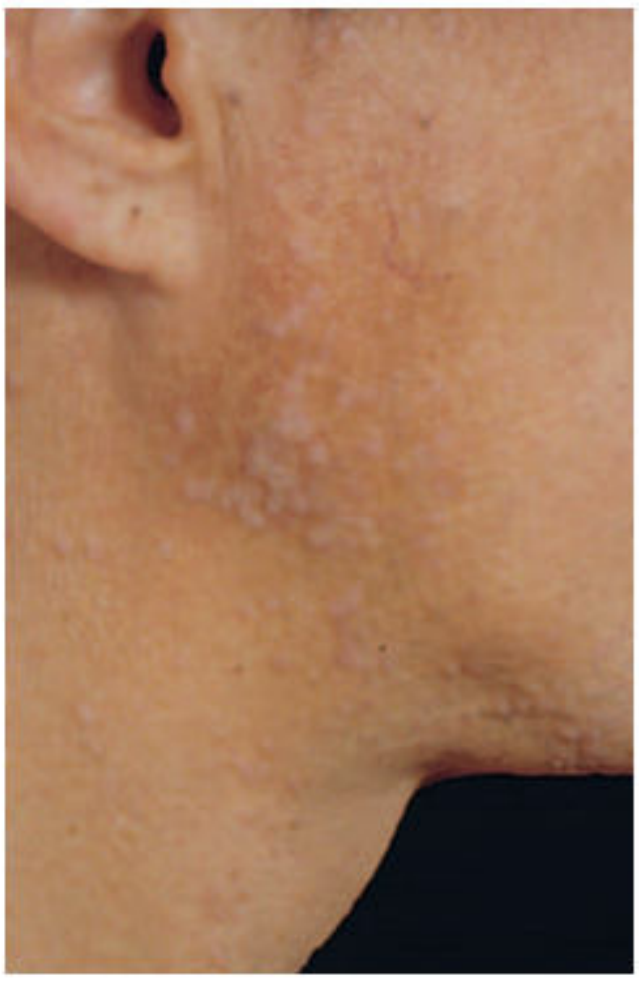


▲ **FIGURE 198-12** Molluscum contagiosum virus infection. Before highly active antiretroviral therapy, multiple facial mollusca would enlarge to cause significant cosmetic disfigurement.

- Human papilloma virus

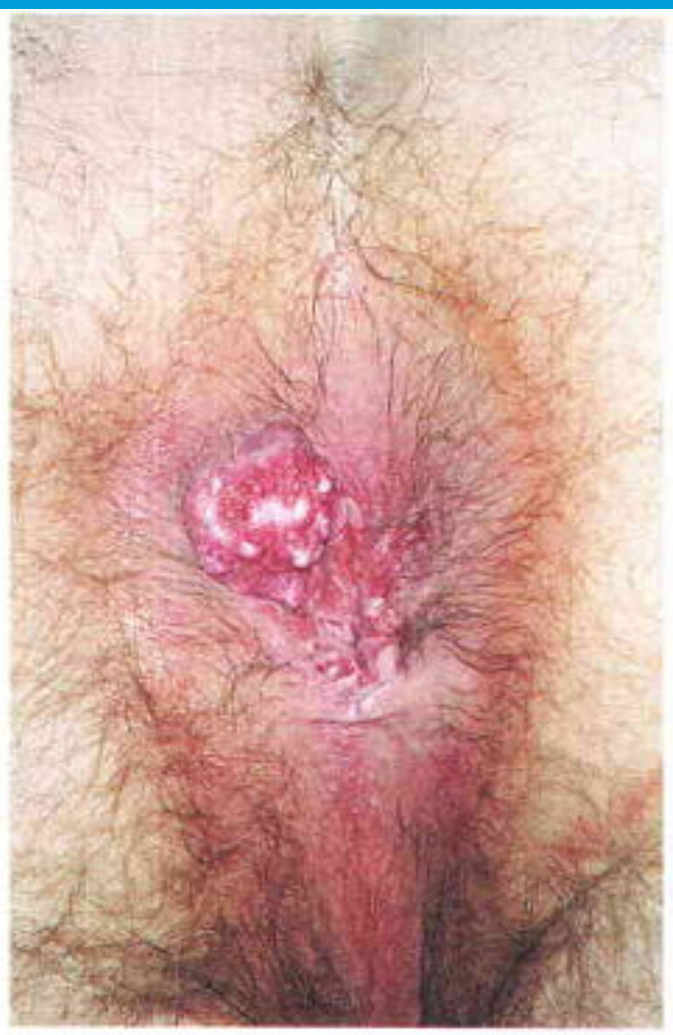
- Advancing disease– verrucae may enlarge, become confluent & unresponsive to therapy

- HPV 5 – unusual pattern of extensive verruca plana & P versicolor like warts



papillomavirus infection: discrete and confluent warty papules on the right cheek and neck. (Courtesy of Dr C.B. Bunker and Imperial

- Oral florid pappilomatosis
- HPV- induced dysplasia- risk factors for high grade dysplasia & cancer



▲ **FIGURE 198-13** Human papillomavirus–induced invasive squamous cell carcinoma in a 32-year-old man with human immunodeficiency virus infection. The para-anal tumor had been present for several months, and histologic analysis showed invasive squamous cell carcinoma.

Protozoal infections

- Scabies:

- Extensive papulosquamous eruption (hyperkeratotic , crusted scabies)
- Secondary staph aureus infection

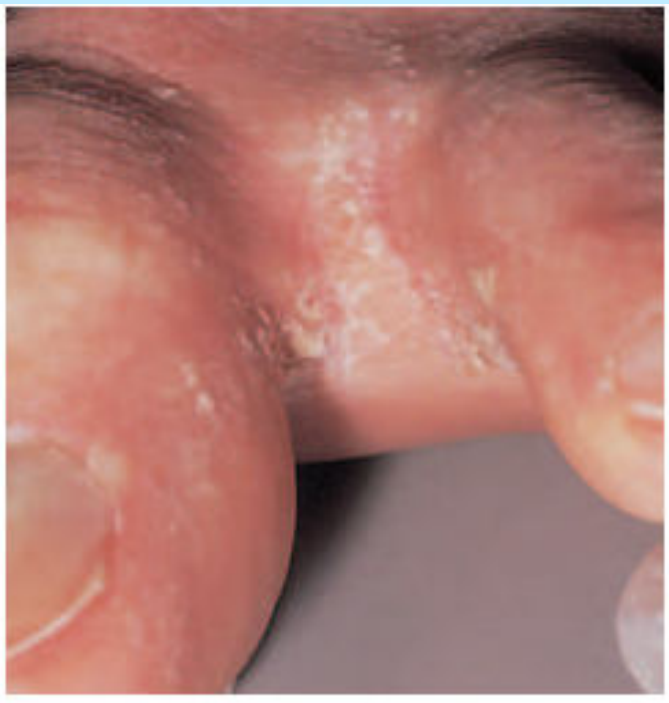


Fig. 26.19 Norwegian scabies: interdigital scale.

Protozoal infections

- **NEOPLASMS**
- Kaposi sarcoma
- Caused by HHV 8
- HIV/ AIDS related KS- disseminated disease with GI & pulmonary involvement

- Cutaneous KS is multicentric often involves the face, oral mucosa, palate and genitalia.
- The classical lesion in HIV is a purple patch, plaque or nodule, which may ulcerate

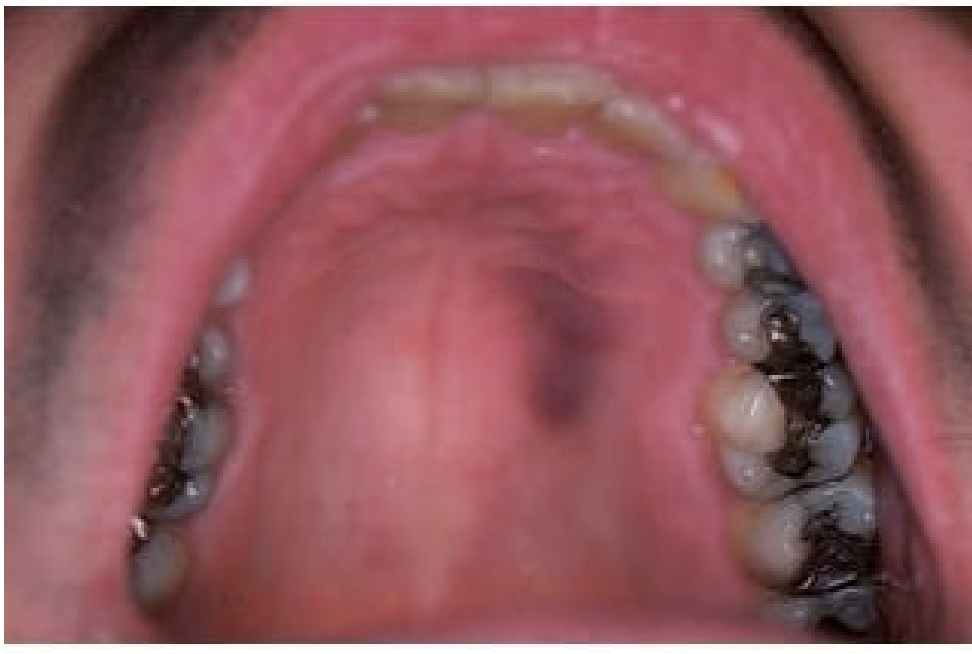
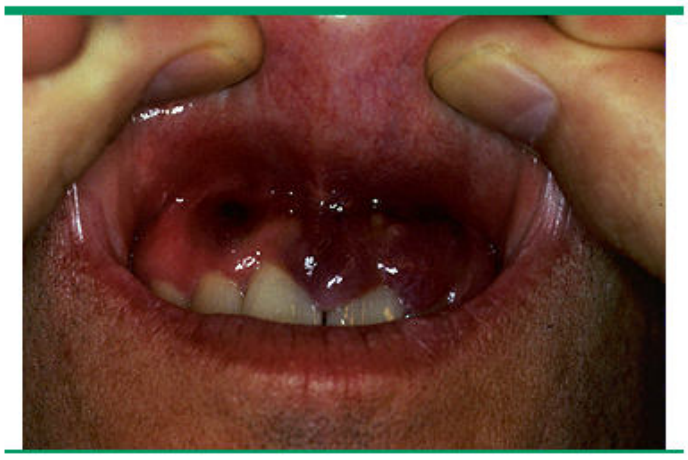
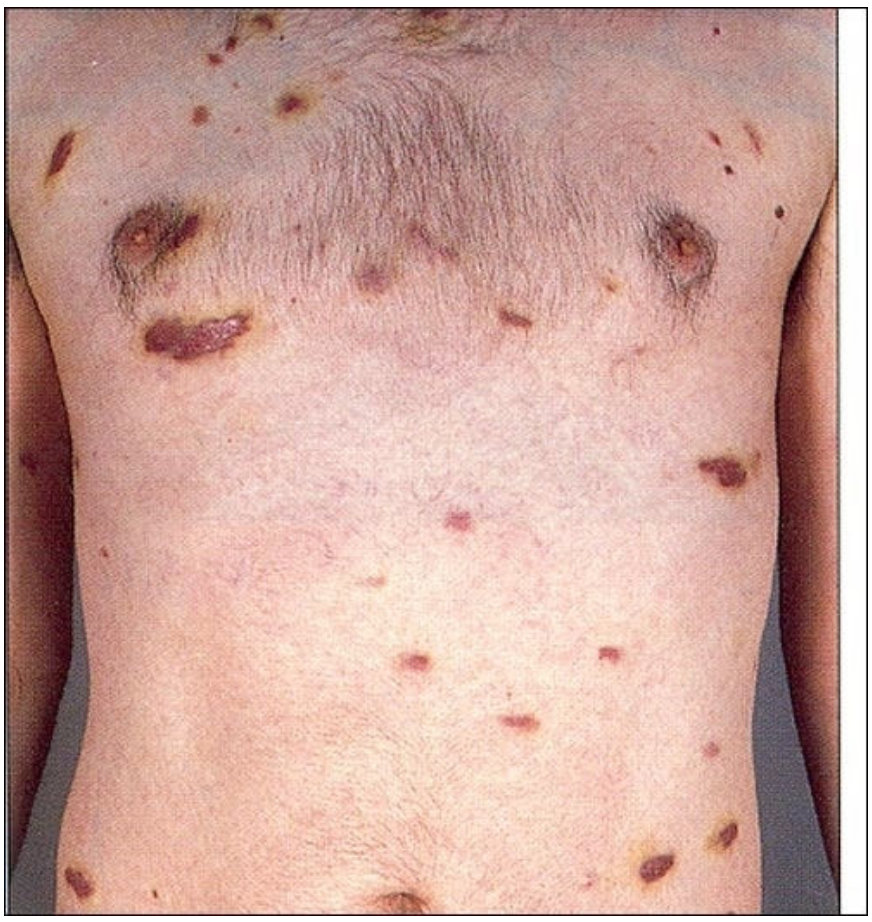


Fig. 26.26 Purple nodules on the palate in a patient with Kaposi's sarcoma (Courtesy of Dr C B. Bunker and Media Resources UCL.

Gingival infiltration in Kaposi's sarcoma



Gingiva appears purple with infiltration. Disfiguing nodular KS lesions are also present on the adjoining area of the hard palate.



- Lesions may be multiple, follow skin creases and may be grouped or linear and koebnerize

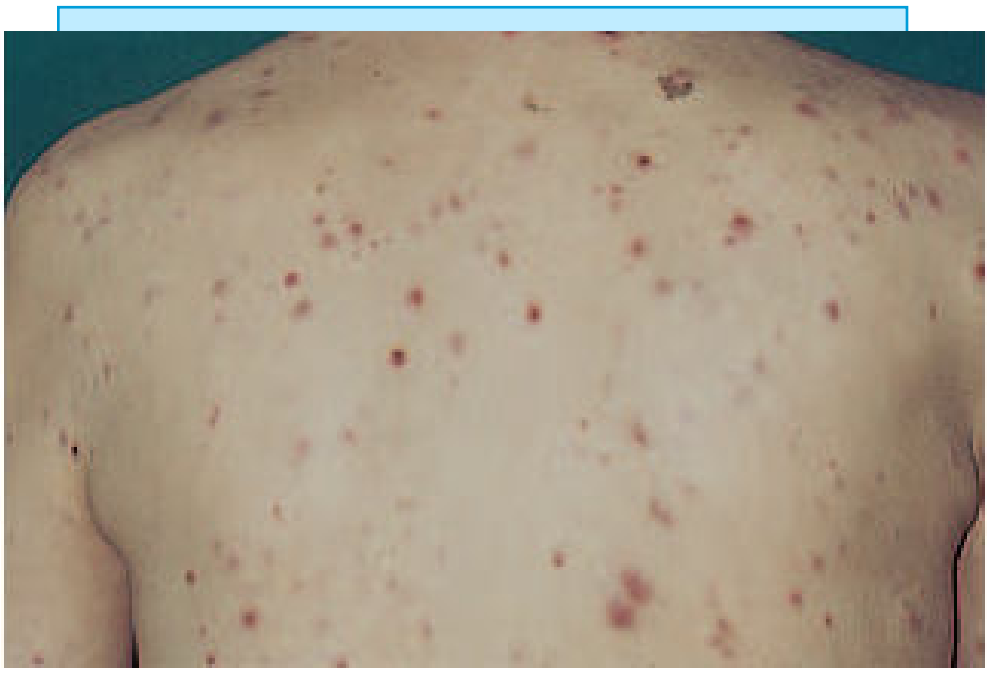
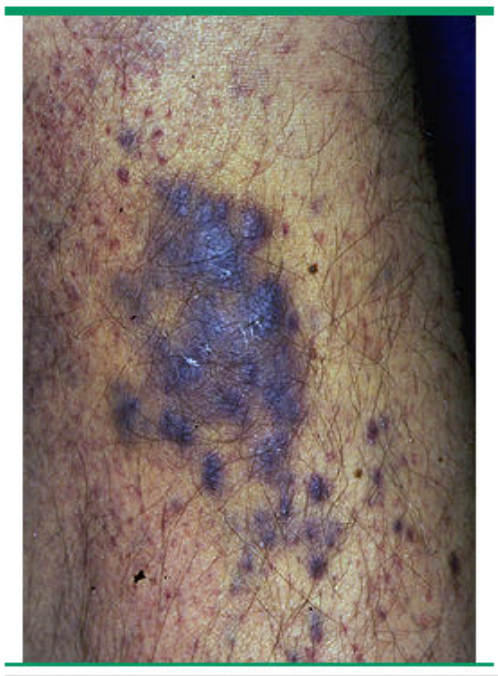


Fig. 26.20 Kaposi's sarcoma: multiple purple nodules and plaques on the back. (Courtesy of Dr C.B. Bunker and Medical Illustration

Follicular pattern in Kaposi's sarcoma

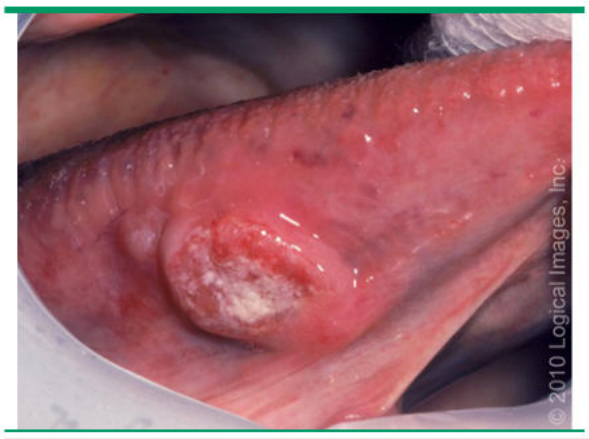


This central plaque is formed by a confluence of small lesions surrounded by papules on the thigh.

Malignancies- Melanoma & Non Melanoma skin cancer (scc)

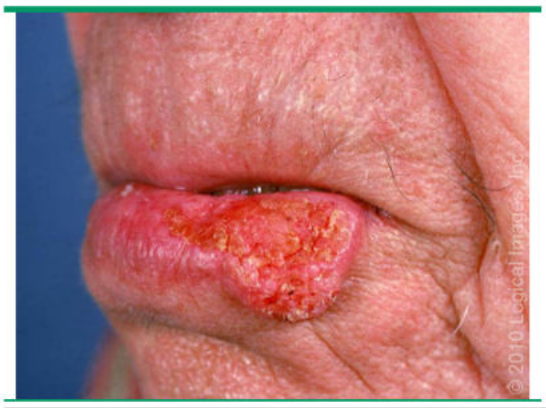
- Increased incidence

Squamous cell carcinoma of the tongue



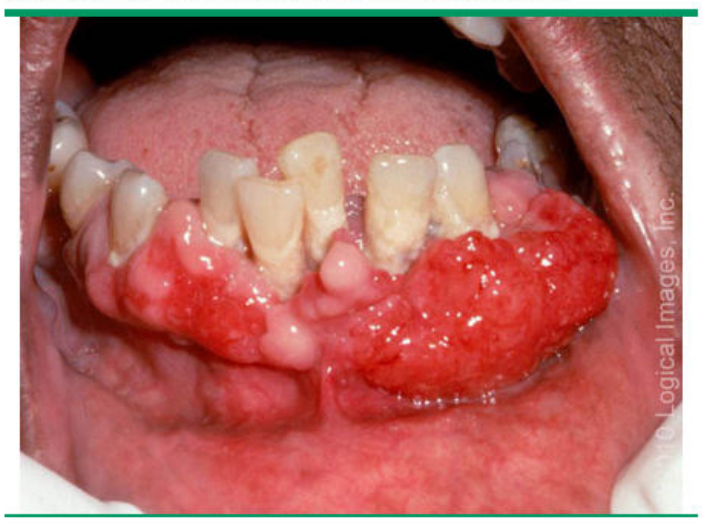
This nodule on the ventral surface of the tongue is a squamous cell carcinoma.

Squamous cell carcinoma on the lip



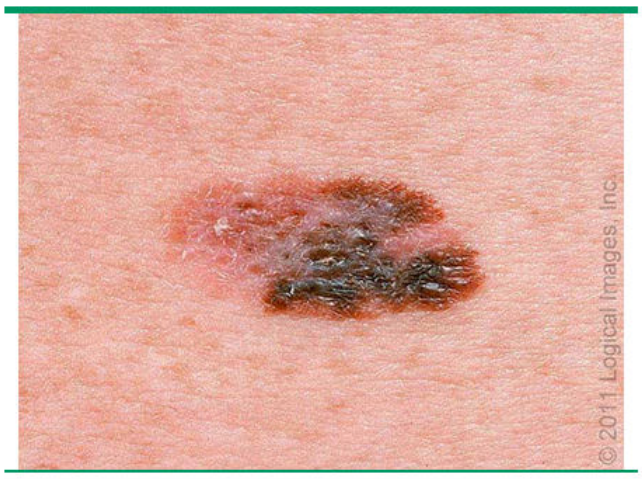
This erythematous, crusted nodule on the lip represents a squamous cell carcinoma.

Squamous cell carcinoma on the gingiva



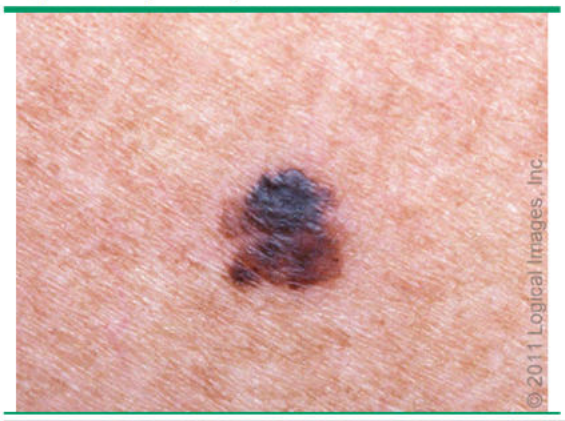
This ulcerated nodule involving the gingiva represents a squamous cell carcinoma.

Superficial spreading melanoma



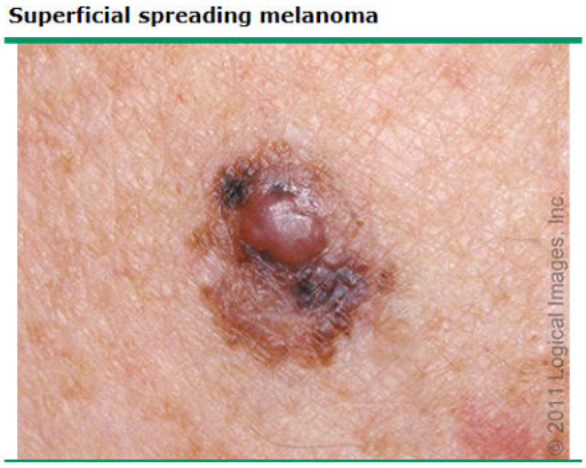
Superficial spreading melanoma showing asymmetry, border irregularities, and variegation of color.

Superficial spreading melanoma



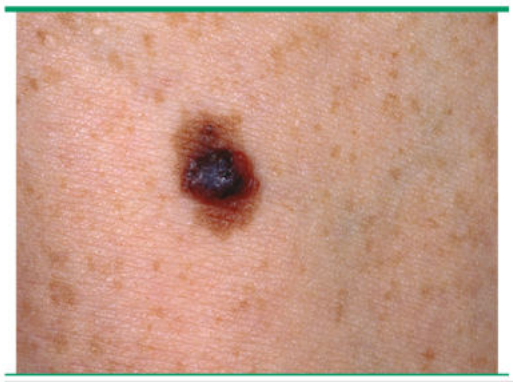
This lesion is asymmetric and presents irregular borders and irregular distribution of the pigmentation.

Superficial spreading melanoma



This lesion is asymmetric and presents border irregularity, color variegation, and a nodular component.

Superficial spreading melanoma

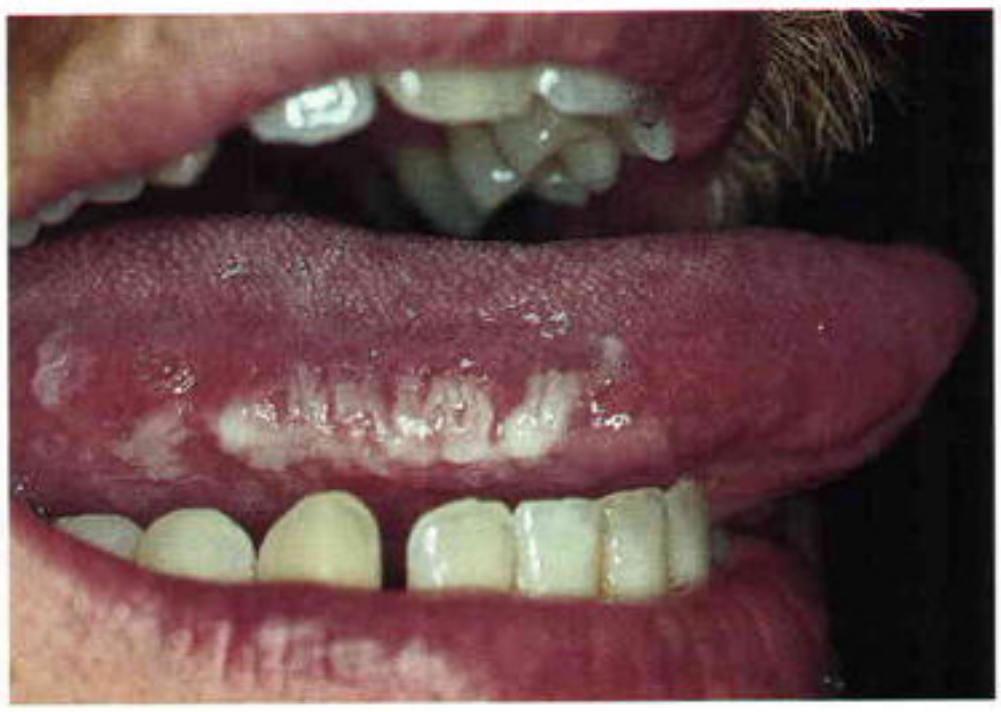


Superficial spreading melanoma on the left posterior leg of a 29-year-old woman.

ORAL CAVITY & HIV

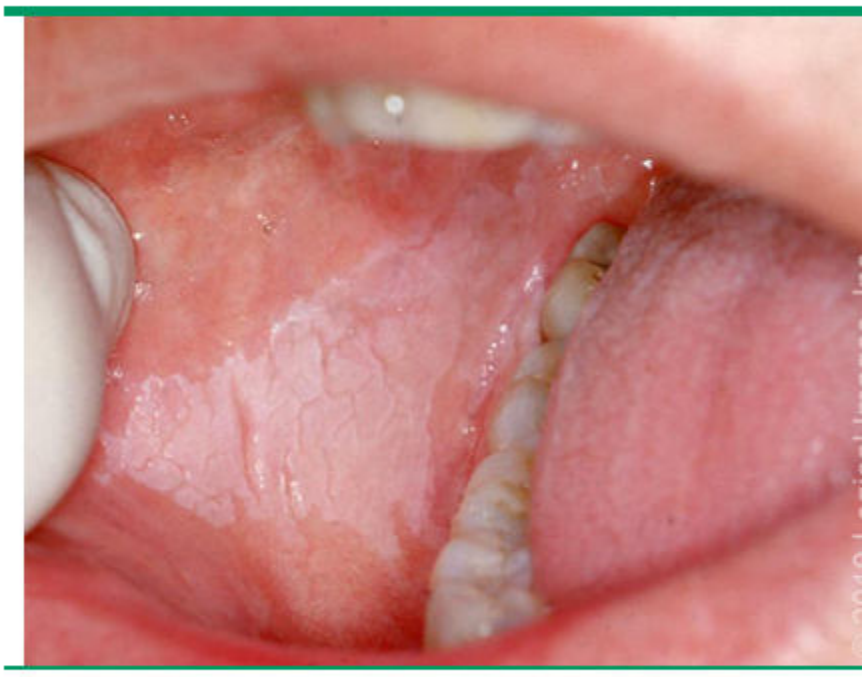
Oral hairy leukoplakia:

- EBV
- Upto 28% of HIV patients
- Whitish epithelial plaques on the lateral tongue with corrugations accentuating the normal tongue ridges



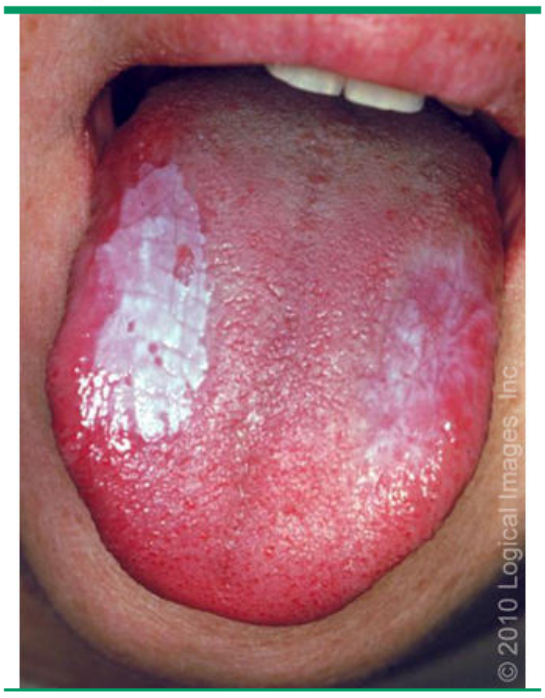
198-5 Oral hairy leukoplakia. White plaques with vertical corrugations on the inf

Leukoplakia



A white plaque is present on the buccal mucosa.

Leukoplakia



A white plaque is present on the tongue.

Table 26.23 Oral side effects of drugs and radiotherapy given for HIV infection.

Hydroxyurea	Oral pigmentation
Foscarnet	Oral ulceration
Interferon	Oral ulceration
Zidovudine (AZT)	Oral pigmentation
Zalcitabine (ddC)	Oral ulceration
Didanosine (ddI)	Dysgeusia, xerostomia
Protease inhibitors	Cheilitis (Fig. 26.27)
Amprenavir	Dysgeusia, perioral paraesthesia
Ritonavir	Dysgeusia, perioral paraesthesia

HAIR & NAILS IN HIV

Table 26.22 Abnormalities of the hair and nails in HIV infection. (After Prose *et al.* [1]; Cribier *et al.* [2]; Bunker & Staughton [3]; Ward *et al.* [4].)

Hair
Patchy and generalized alopecia
Hypertrichosis of the eyelashes
Eyelash trichomegaly
Hypertrichosis including of the eyelashes: zidovudine (AZT)
Alopecia: indinavir, lamivudine (3TC), stavudine (d4T), didanosine (ddI)
Alopecia universalis: HAART
Curly hair: HAART
Nails
Clubbing
Half and half nails
Transverse (Beau's lines) and longitudinal ridging
Loss of the lunula
Leukonychia
Onycholysis and onychoschizia
Periungual erythema [15]
Longitudinal melanonychia
Blue nails [14]
Onychomycosis
Longitudinal melanonychia: zidovudine [16]
Melanonychia: hydroxyurea [17,18]
Paronychia/pyogenic granuloma: zidovudine (AZT), lamivudine (disputed)
Ingrown toenail and paronychia/pyogenic granuloma: indinavir

STD & HIV

- Co factor effect of ulcerative & non ulcerative STD on HIV transmission:
- Lack of mechanical skin/ mucous membrane / endocervical epithelium
- Inflammatory millieu

- SYPHILIS
- Giant chancre
- lues maligna—sec syphilis with vasculitis– fever, malaise, headache, nodules, indurated plaques with/ without ulceration

- CHANCROID
- Genital ulcers tends to be larger & persist longer
- Less responsive to standard therapy

- HERPES GENITALIS
- As immunosupression progresses , lesion smay persist or progress to chronic enlarged painful ulcers with raised margins, ulcer may bleed

- Higher dose & longer period treatment with Acyclovir

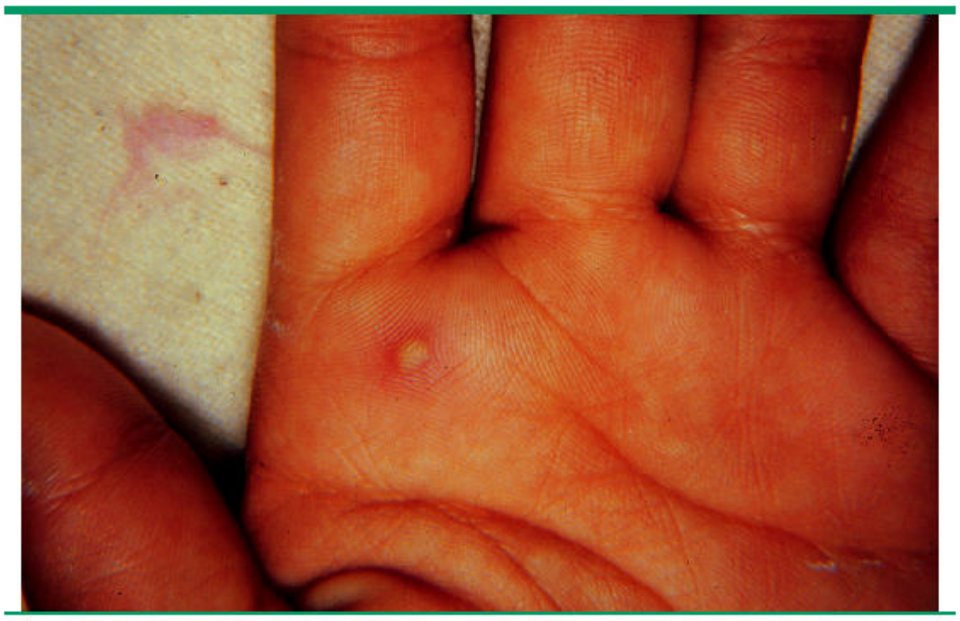
- GRANULOMA INGUINALE

- Lesion may be larger, extensive, pseudobubo formation which may burst producing ulceration, slow response to treatment

- LGV
- Acute inflammation with bilateral inguinal bubo which may burst → ulceration
- prolonged therapy may be required.

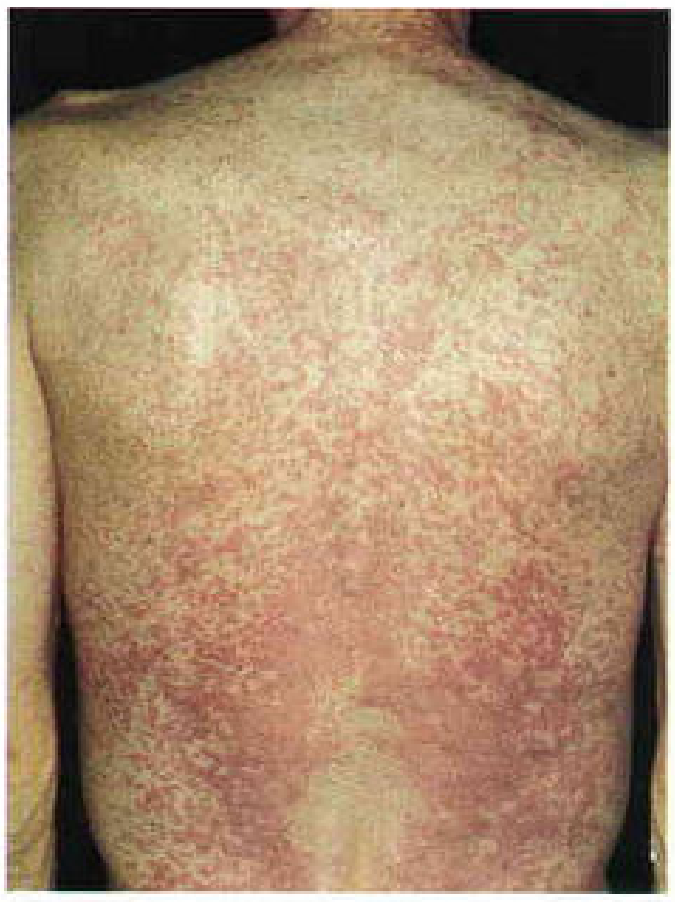
Gonococcal infection

Skin lesions in disseminated gonococcal infection

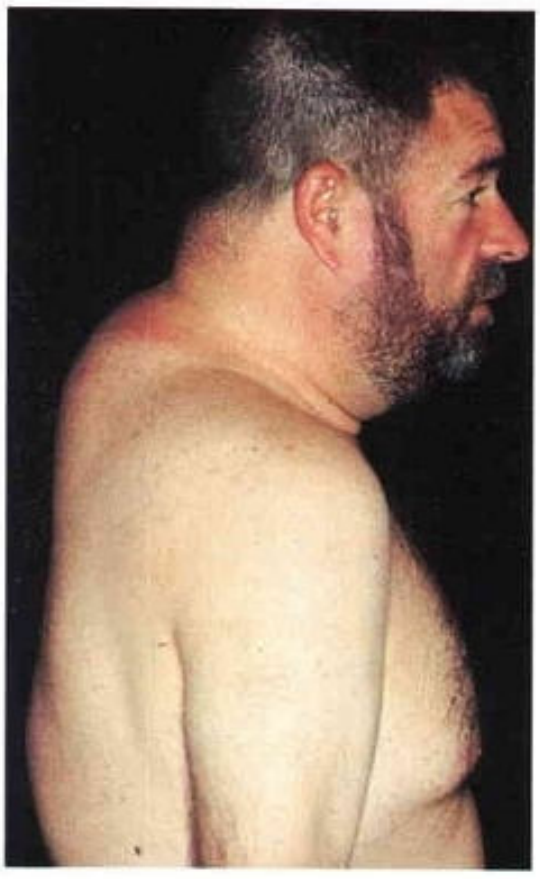


Typical small pustular skin lesion in a patient with disseminated gonococcal infection.

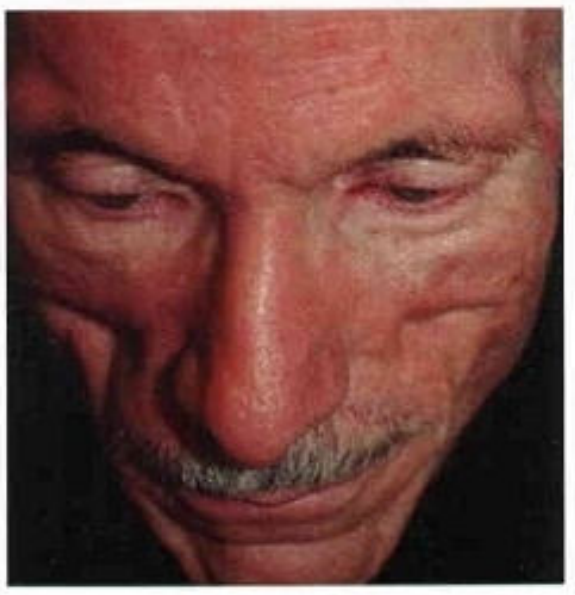
- Adverse cutaneous drug reaction and HIV



▲ **FIGURE 198-6** Adverse cutaneous drug reaction to trimethoprim-sulfamethoxazole. A typical exanthematous eruption occurred on the trunk on the tenth day after initiation of therapy with the drug.



▲ **FIGURE 198-7** Lipohypertrophy. The subcutaneous fatty tissue of the cervico-thoracic region as well as the preauricular cheeks and neck are strikingly enlarged.



▲ **FIGURE 198-8** Lipoatrophy. The cheeks are hollowed secondary to loss of subcutaneous fat, causing a significant cosmetic concern in this patient with human immunodeficiency virus infection who was taking highly active antiretroviral drugs. Lipohypertrophy was also present on the neck and upper central back.

- Thank You

Table 26.18 Cutaneous side effects of antiretroviral drugs. (After Bunker & Staughton [10]; Ward *et al.* [26].)

Nucleoside reverse transcriptase inhibitors	
Zidovudine (AZT)	Insect bite reaction Discoloration of the skin (also mucosa and nails) especially in dark-skinned individuals) Polymyositis Vasculitis
Didanosine (ddI)	Vasculitis Stevens–Johnson syndrome Ofuji's papuloerythroderma
Lamivudine (3TC)	Vasculitis Anaphylaxis, urticaria and angio-oedema Allergic contact dermatitis
Zalcitabine (ddC)	Granuloma annulare
Stavudine (d4T)	Lipodystrophy

Non-nucleoside reverse transcriptase inhibitors	
Nevirapine	Stevens–Johnson syndrome/toxic epidermal necrolysis Lipodystrophy
Efavirenz	Photosensitivity Stevens–Johnson syndrome/toxic epidermal necrolysis Gynaecomastia Vasculitis

Protease inhibitors	
Ritonavir	Toxic erythema Haematoma IgA-mediated hypersensitivity Panniculitis Paraesthesia Bullae
Indinavir	Toxic epidermal necrolysis Erythroderma Paronychia/pyogenic granuloma Striae Paraesthesia
Saquinavir	Photosensitivity Fixed drug eruption
Nelfinavir	Urticaria Panniculitis
All protease inhibitors	Lipodystrophy Toxic pustoloderma Pruritus and xerosis Panniculitis Tendon xanthomas Hypersensitivity syndrome