HIV Treatment and care

National AIDS Programme, DoPH, MOHS

Provision of Care & Support

- HIV/AIDS is a relatively new disease
- ***New drugs*** are discovered and new treatment protocols introduced
- Management of HIV become available and better understanding of the disease
- ***Long term use of ART*** has also resulted in pros and cons of some drug combinations and treatment regimens
- Serious side effects of some of the antiretroviral drugs.
- ***In resource rich countries*** the latest technology and the newest ART drugs can be employed
- ***In resource limited situations*** a balance between resources available and the best possible solution for a PLHIV.

Summary of key recommendations in Clinical management of HIV infection in Myanmar 2017

Retesting prior to enrollment in care

- Retest all clients diagnosed HIV-positive with a **second specimen** and preferably second operator using the same testing strategy and algorithm before enrolling in client in care and/or initiating ART.
- Retesting people on ART is not recommended, as there are potential risks of incorrect diagnosis, particularly for in vitro diagnosis (IVDs) that use oral fluid specimens.

HIV diagnosis in infants and children

- In infants and children undergoing virological testing, the following nucleic acid testing (NAT) assays are strongly recommended for use: HIV DNA on DBS; HIV RNA on plasma or DBS.
- All HIV exposed infant should have HIV virological testing at 4-6 weeks of age or at the earliest opportunity thereafter.
- In infants with an initial positive virological test result, ART should be started without delay and, at the same time, a second specimen is collected to confirm the initial positive virological test result. Immediate initiation of ART saves lives and should not be delayed while waiting for the result of the confirmatory testing.

*HIV virological assays used for the purpose of clinical diagnostic testing (usually at or after 6 weeks of age) have a sensitivity of at least 95% and ideally greater than 98%, and specificity of 98% or more under quality assured, standardized and validated laboratory conditions.

Post-exposure prophylaxis

A regimen for post-exposure prophylaxis for HIV with two drugs is effective, but three drugs are preferred.

Post-exposure prophylaxis ARV regimens for adults and adolescents:

- Preferred backbone regimen: **TDF + 3TC (or FTC)**
- Preferred third drug: LPV/r or ATV/r
- Alternative third drug: EFV

Post-exposure prophylaxis ARV regimens for children ≤10 years:

- Preferred backbone regimen: **AZT + 3TC.**
- Alternative regimens: ABC + 3TC or TDF + 3TC (or FTC).
- Preferred third drug: LPV/r
- Age appropriate alternative third drug: can be ATV/r, RAL, DRV, EFV and NVP

A full 28-day prescription of antiretroviral drugs should be provided for HIV post-exposure prophylaxis following initial risk assessment.

- Enhanced adherence counselling is suggested for all individuals initiating HIV post-exposure prophylaxis.

Pre-ART Care

i. WHO clinical staging of HIV disease
ii. TB screening: Screen for TB with any one of the following symptoms;
    - Current cough
    - Fever
    - Weight loss
    - Night sweats
    - Lymph node enlargement
iii. Management of Opportunistic Infections and Prophylaxis
iv. *Laboratory Assessment
v. Counselling (patient readiness, treatment counselling)

When to start ART

When to start ART in adults and adolescents	**Initiate ART in all adults living with HIV, regardless of WHO clinical stage and at any CD4 cell count.** **As a priority, initiate ART in all adults with severe or advanced HIV clinical disease (WHO clinical stage 3 or 4) and adults with a CD4 count ≤350 cells/mm3**
When to start ART in pregnant and breastfeeding women	Initiate ART in all pregnant and breastfeeding women living with HIV, regardless of WHO clinical stage and at any CD4 cell count and continued lifelong
When to start ART in adolescents (10–19 years of age)	Initiate ART in all adolescents living with HIV, regardless of WHO clinical stage and at any CD4 cell count). As a priority, initiate ART in all adolescents with severe or advanced HIV clinical disease (WHO clinical stage 3 or 4) and adolescents with a CD4 count ≤350 cells/mm3.
When to start ART in children younger than 10 years of age	Initiate ART in all children living with HIV, regardless of WHO clinical stage or at any CD4 cell count:
	As a priority, initiate ART in all children <2 years of age or children younger than 5 years of age with WHO clinical stage 3 or 4 or CD4 count ≤750 cells/mm3 or CD4 percentage <25% and children 5 years of age and older with WHO clinical stage 3 or 4 or CD4 count ≤350 cells/mm3.

Timing of ART for adults and children with TB

- **Initiate ART in all TB patients living with HIV regardless of CD4 count.**
- TB treatment should be initiated first, followed by ART as soon as possible within the first 8 weeks of treatment.
- HIV-positive TB patients with profound immunosuppression (e.g. CD4 counts less than 50 cells/ mm3) should receive ART within the first two weeks of initiating TB treatment.
- ART should be started in any child with active TB disease as soon as possible and within 8 weeks following the initiation of anti-tuberculosis treatment regardless of the CD4 cell count and clinical stage.
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Monitoring the response to ART and diagnosing treatment failure

- Routine viral load monitoring can be carried out at 6 months of ART, at 12 months of ART and then every 12 months thereafter if the patient is stable on ART.
- In settings where routine viral load monitoring is available, CD4 cell count monitoring can be stopped in individuals who are stable on ART and virally suppressed.
- Viral load is recommended as the preferred monitoring approach to diagnose and confirm treatment failure.
- **Viral failure is defined by a persistently detectable viral load exceeding 1000 copies/ml (that is, two consecutive viral load measurements within a 3-month interval, with adherence support between measurements) after at least 6 months of starting a new ART regimen.**

What ART to start?

First-line ART for adults and adolescents

Already adapted the single preferred regimen as TDF + 3TC(FTC)+EFV from 2014

- Recommended regimen: 2 NRTI + 1 NNRTI or 1 Integrase Inhibitor (INSTI)
  Preferred option: TDF + 3TC (or FTC) + EFV as a fixed-dose combination
  Alternative first line regimen:
  - AZT+3TC+EFV
  - ABC + 3TC + EFV
  - TDF + 3TC (or FTC) + DTG

Pregnant and breastfeeding women

- Preferred regimen: TDF + 3TC (or FTC) + EFV as a fixed-dose combination

Alternative first line regimen:

- AZT+3TC+EFV(or NVP)
- TDF + 3TC (or FTC) + NVP

What ART to start?

First-line ART for children aged 3 to 10 years of age

Preferred regimen: ABC + 3TC + EFV

Alternative first line regimen:

- ABC + 3TC + NVP
- AZT + 3TC + EFV or NVP
- TDF + 3TC (or FTC) + EFV or NVP

First-line ART for children younger than 3 years of age

- referred first line regimen: ABC (or AZT) + 3TC + LPV/r Alternative first line regimen: ABC (or AZT) + 3TC + NVP

Tuberculosis

- **Xpert MTB should be used as the initial diagnostic test in adults and children suspected of having HIV-associated TB or multidrug resistant TB.**
- LF-LAM may be used to assist in the diagnosis of active TB in adults inpatients living with HIV, with signs and symptoms of TB (pulmonary and/or extrapulmonary), who have a CD4 count ≤ 100 cells/mm3 or people living with HIV who are seriously ill regardless of CD4 count or with unknown CD4 count.
- LF-LAM should not be used as a screening test for active TB.

Isoniazid preventive therapy (IPT)

- Adults and adolescents living with HIV should be screened with a clinical algorithm; those who do not report any one of the symptoms of current cough, fever, weight loss or night sweats are unlikely to have active TB and should be offered IPT.
- Adults and adolescents living with HIV who have an unknown or positive tuberculin skin test (TST) status and are unlikely to have active TB should receive at least 6 months of IPT. IPT should be given to such individuals regardless of the degree of immunosuppression and also to those on ART and pregnant women.

Adherence - Important measures when starting ART

- Patients should understand
  - that ART is suppressive therapy
  - that ART is life-long
  - that near perfect adherence is necessary to prevent ART resistance (at least 95% to regimen)
  - that there are possibilities of side effects
- Assessment of patient readiness should be carried out before starting ART (ART should never be prescribed casually at the first visit).

Opportunistic Infections in HIV/AIDS

Most people with HIV die of opportunistic infections.

Prevention, diagnosis and treatment of OIs is an important part of the management of HIV,

Most people still present with OIs in **resource limited** countries.

Major OIs need to be diagnosed and *treatment started before starting ART.*

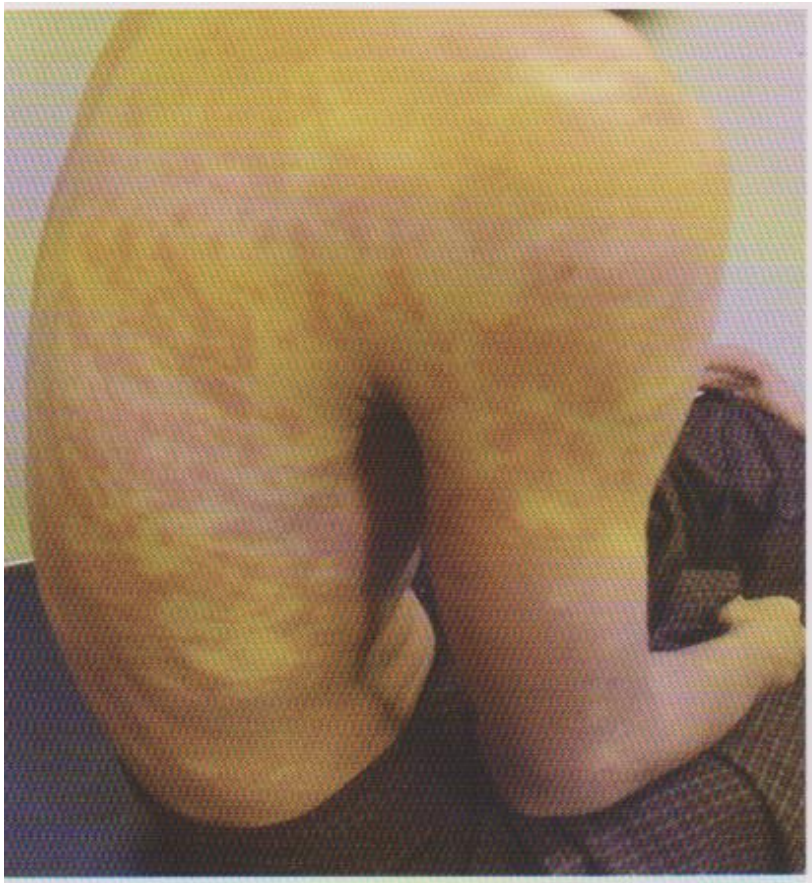
Giving *ART without diagnosing and treating major OIs* in late disease will lead to disaster

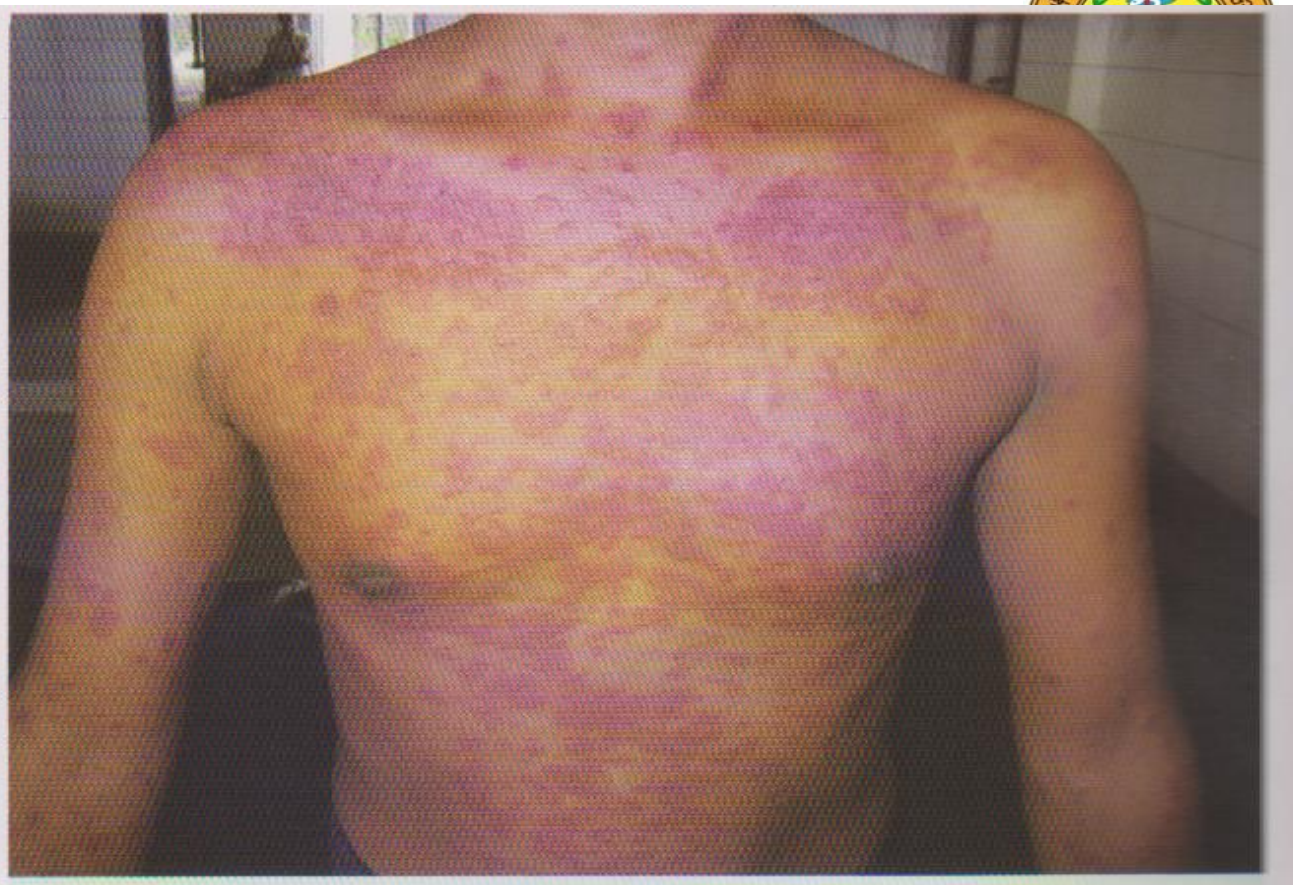
Major opportunistic infections

1. Mycobacterium tuberculosis
2. Pneumocystis jeroveci pneumonia (previously known as *Pneumocystis carinii*)
3. Cerebral toxoplasmosis
4. Cryptococcosis
5. Systemic penicilliosis

Cotrimoxazole prophylaxis

- Co-trimoxazole prophylaxis is recommended for adults (including pregnant women) with severe or advanced HIV clinical disease (WHO stage 3 or 4) and/or with a CD4 count ≤350 cells/mm3.
- Co-trimoxazole prophylaxis may be discontinued in adults (including pregnant women) with HIV who are clinically stable on ART, with evidence of immune recovery and viral suppression.
- Routine co-trimoxazole prophylaxis should be given to all HIV-infected patients with active TB disease regardless of CD4 cell count.
- Co-trimoxazole prophylaxis is recommended for infants, children, and adolescents with HIV, irrespective of clinical and immune conditions.





WHO Clinical Staging of HIV disease

WHO Clinical Staging of HIV disease

Clinical stage 1

Asymptomatic

Persistent generalized lymphadenopathy (PGL) 30-50%

Clinical stage 2

Moderate unexplained weight loss (<10% of body weight)

Recurrent respiratory infections (sinusitis, tonsillitis, otitis media, pharyngitis)

Herpes zoster

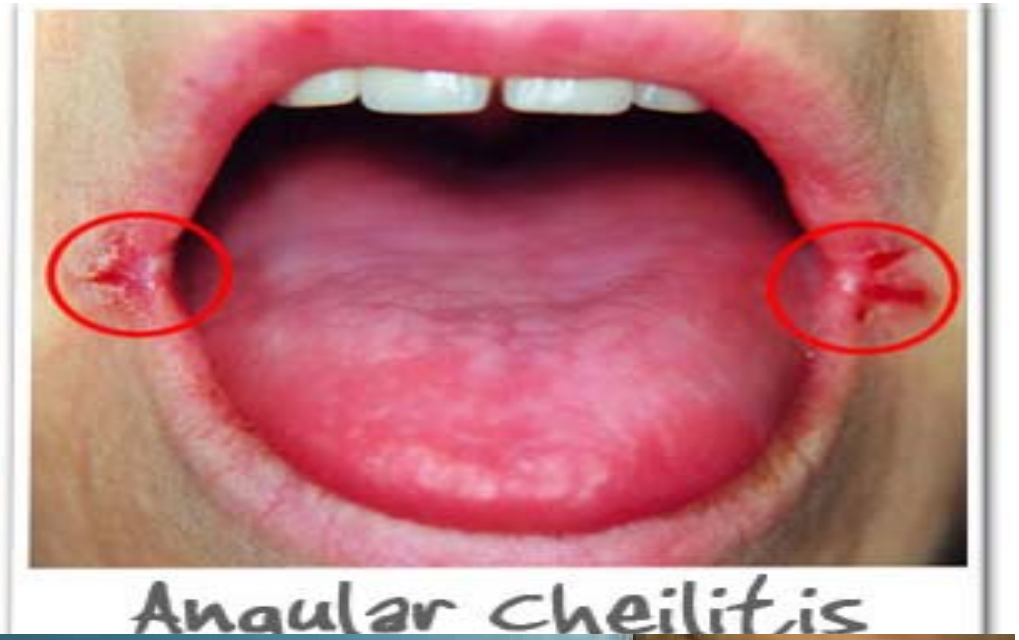
Angular cheilitis

Recurrent oral ulcerations

Pruritic papular eruptions

Seborrhoeic dermatitis

Fungal nail infections


Angular cheilitis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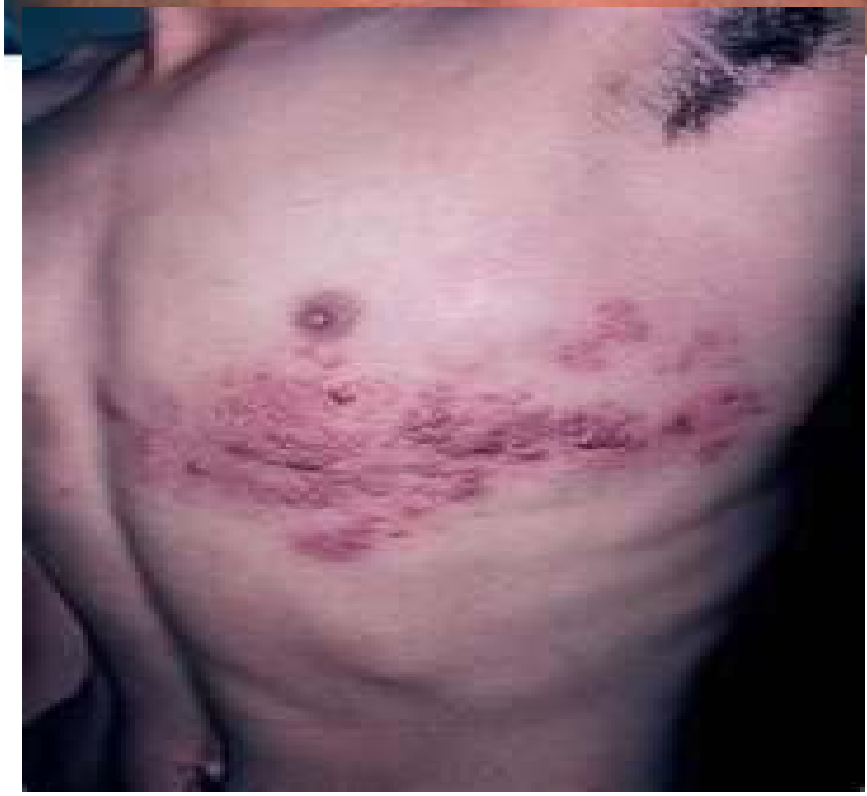
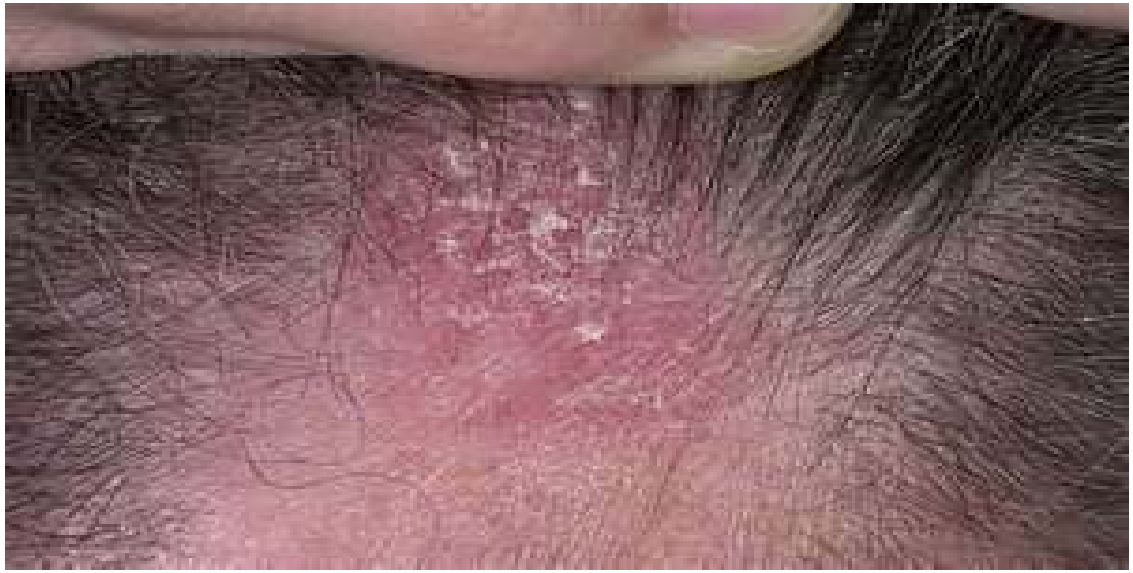
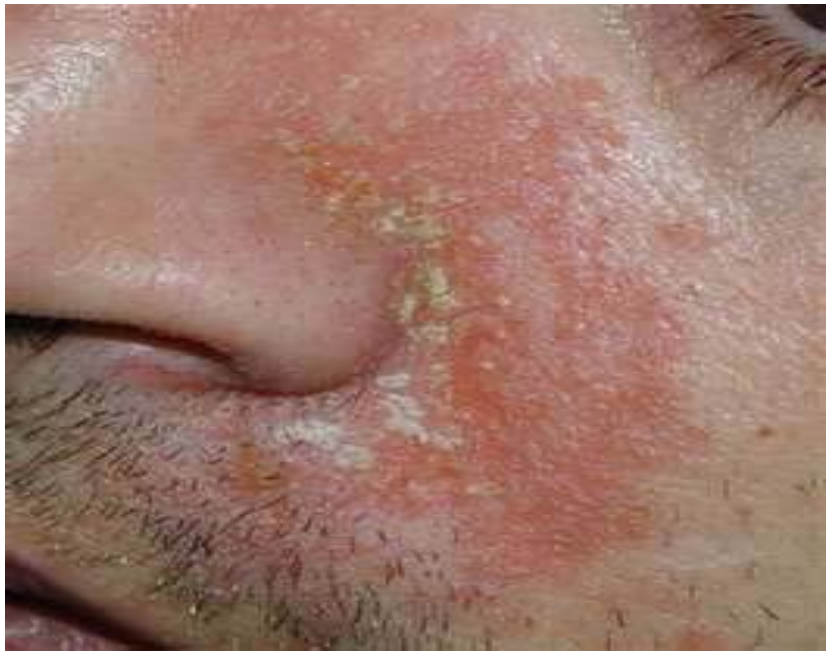


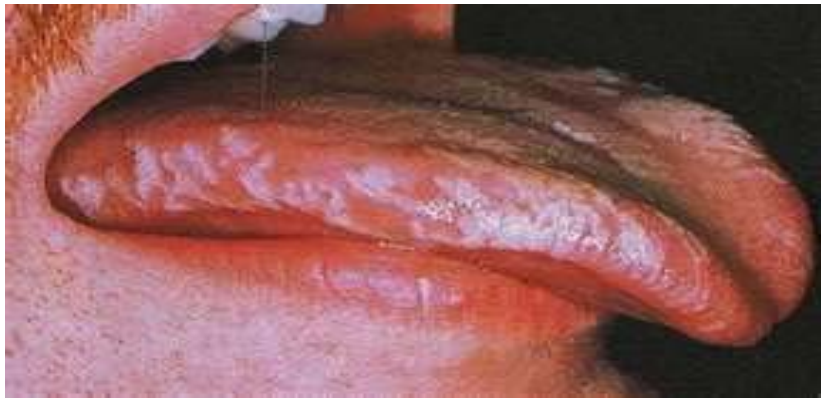


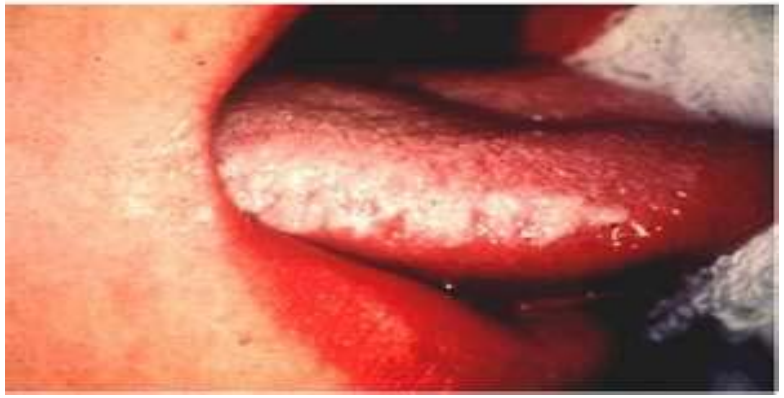


WHO Clinical Staging of HIV disease

Clinical stage 3

- Unexplained weight loss (>10% of body weight)
- Unexplained chronic diarrhea for longer than 1 month
- Unexplained persistent fever (intermittent or constant for longer than 1 month)
- Persistent oral candidiasis
- Oral hairy leukoplakia (OHL)
- Pulmonary tuberculosis
- Severe bacterial infections (e.g.pneumonia, empyema, meningitis, pyomyositis, bone or joint infection, bacteraemia, severe pelvic inflammatory disease
- Acute necrotizing ulcerative stomatitis, gingivitis or periodontitis
- Unexplained anaemia (< 8 g/dl), neutropenia (< 0.5 x 109 /l)and/or chronic thrombocytopenia (< 50 x 109 /l)

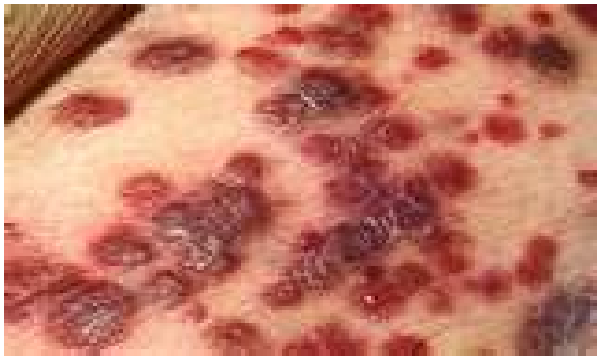




WHO Clinical Staging of HIV disease

Clinical stage 4

- HIV wasting syndrome
- *Pneumocystis jiroveci pneumonia*
- Recurrent severe bacterial pneumonia
- Chronic herpes simplex infection (orolabial, genital or anorectal >1 month's duration or visceral at any site)
- Oesophageal candidiasis (or candidiasis of trachea, bronchi or lungs)
- Extrapulmonary tuberculosis
- Kaposi's sarcoma
- Cytomegalovirus disease (retinitis or infection of other organs, excluding liver, spleen and lymph nodes)
- Central nervous system toxoplasmosis
- HIV encephalopathy
- Extrapulmonary cryptococossis including meningitis
- Disseminated nontuberculous mycobacteria infection
- Progressive multifocal encephalopathy
- Chronic cryptosporidiosis
- Chronic isosporiasis
- Disseminated mycosis* (histoplasmosis, coccidiomycosis)
- Recurrent septicaemia (including nontyphoidal Salmonella)
- Lymphoma (cerebral or B cell non-Hodgkin)
- Invasive cervical carcinoma
- Atypical disseminated leishmaniasis
- Symptomatic HIV-associated nephropathy or HIV-associated cardiomyopathy

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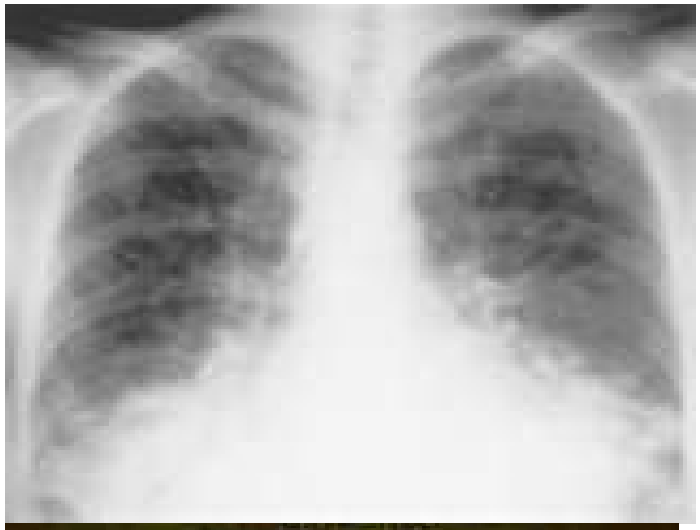

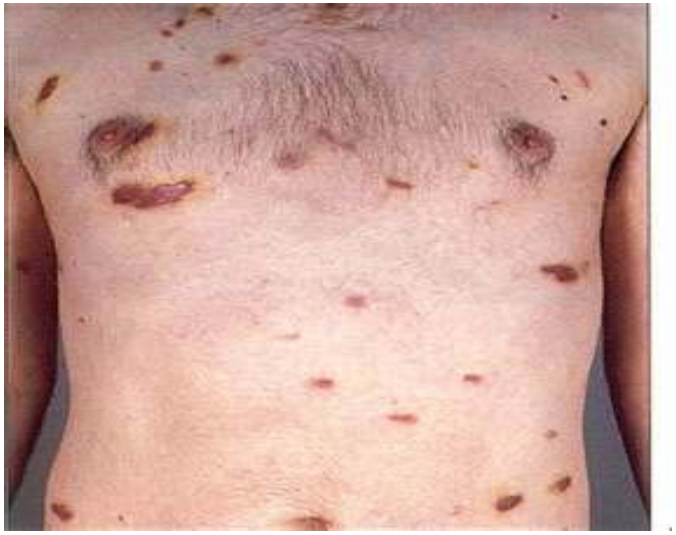

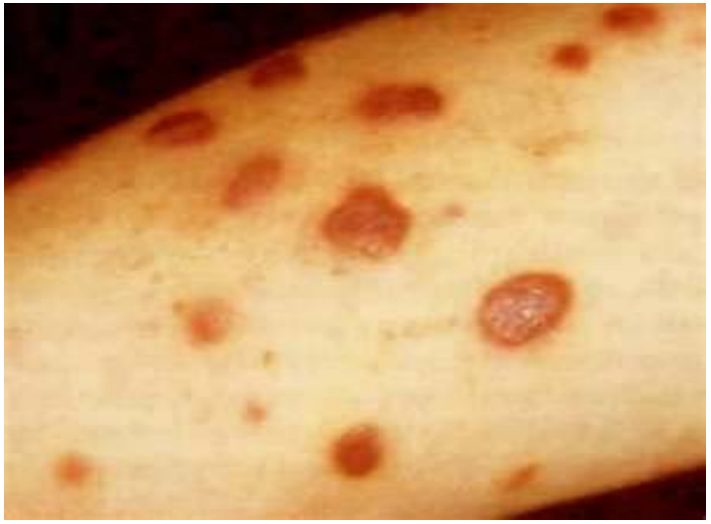

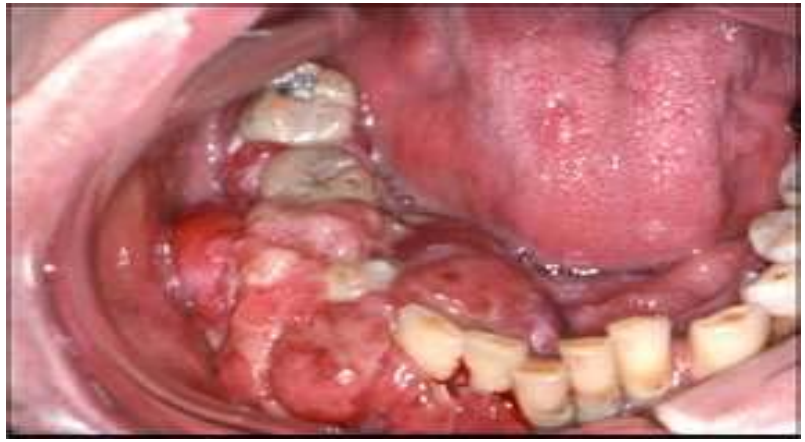

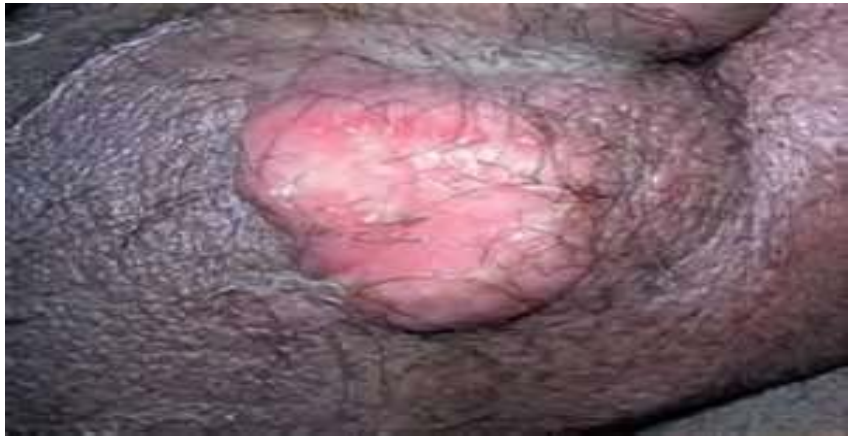

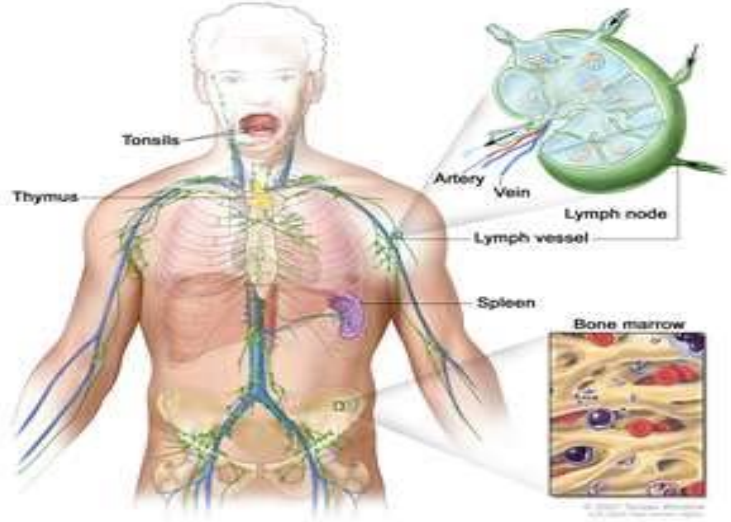
Tonsils
Thymus
Artery
Vein
Lymph node
Lymph vessel
Spleen
Bone marrow

Thank you for all your hard work and support!