

WHO Staging System for HIV Infection and Disease in Adults and Adolescents
Current or past history of any of the conditions described

<p>Clinical Stage I:</p> <ol style="list-style-type: none">1. Asymptomatic2. Current or past history of persistent generalized lymphadenopathy (PGL) <p><i>Performance scale 1: Asymptomatic, normal activity</i></p>
<p>Clinical Stage II - current or past history of:</p> <ol style="list-style-type: none">3. Weight loss, $\leq 10\%$ of body weight4. Minor mucocutaneous manifestations (seborrheic dermatitis, prurigo, fungal nail infections, recurrent oral ulcerations, angular cheilitis)5. Herpes zoster within the last 5 years6. Recurrent upper respiratory tract infections (i.e. bacterial sinusitis) <p><i>And/or Performance scale 2: Symptomatic, normal activity</i></p>
<p>Clinical Stage III – current or past history of:</p> <ol style="list-style-type: none">7. Weight loss $> 10\%$ of body weight8. Unexplained chronic diarrhea > 1 month9. Unexplained prolonged fever (intermittent or constant) > 1 month10. Oral candidiasis (thrush)11. Oral hairy leukoplakia12. Pulmonary tuberculosis within the past year13. Severe bacterial infection (i.e. pneumonia, pyomyositis) <p><i>And/or Performance scale 3: bed-ridden $< 50\%$ of the day during the past month</i></p>
<p>Clinical Stage IV – current or past history of:</p> <ol style="list-style-type: none">14. HIV wasting syndrome¹15. Pneumocystis carinii pneumonia16. CNS toxoplasmosis17. Cryptosporidiosis with diarrhea > 1 month18. Extrapulmonary cryptococcosis19. Cytomegalovirus (CMV) disease of an organ other than liver, spleen or lymph nodes20. Herpes simplex virus (HSV) infection, mucocutaneous > 1 month, or visceral any duration21. Progressive multifocal leukoencephalopathy (PML)22. Any disseminated endemic mycosis (i.e. histoplasmosis, coccidioidomycosis)23. Candidiasis of the esophagus, trachea, bronchi or lungs24. Disseminated atypical mycobacterium25. Non-typhoid Salmonella septicemia26. Extrapulmonary tuberculosis27. Lymphoma28. Kaposi's sarcoma (KS)29. HIV encephalopathy² <p><i>And/or Performance scale 4: bed-ridden $> 50\%$ of the day during the last month</i></p>

¹ HIV wasting syndrome: weight loss of $> 10\%$ body weight, plus either unexplained chronic diarrhea (> 1 month), or chronic weakness and unexplained prolonged fever (> 1 month).

² HIV encephalopathy: clinical findings of disabling cognitive and/or motor dysfunction interfering with activities of daily living progressing over weeks to months, in the absence of a concurrent illness or condition other than HIV infection that could explain the findings)

Presumptive and Definitive Diagnostic Criteria for WHO Events

These criteria are adapted from those developed for the DART trial³

The stages are based on the WHO interim staging system. The stages have been modified to incorporate initial inconsistencies and later changes introduced in the 1993 US Centres for Disease Control and Prevention AIDS surveillance definition (MMWR 1992; 41[RR41]: 1-19. The presumptive and definitive criteria outlined for each clinical event are modified from CDC definitions where applicable; or have been generated for the DART trial.³

EVENT	PRESUMPTIVE CRITERIA	DEFINITIVE CRITERIA
WHO STAGE 1		
Persistent generalised lymphadenopathy (PGL)	Swollen or enlarged lymph nodes >1cm, non-tender, extra-inguinal sites, >3 months, in absence of known cause	Histology: germinal centre hyperplasia, lymph node structure preserved
WHO STAGE 2		
Weight loss, less than 10% of body weight	Patient report of loss of weight without trying, in the absence of noticeable thinning of face and extremities	Loss of less than 10% weight without trying compared with best attained weight recorded in last 6 months
Seborrheic dermatitis	Itchy, scaly skin condition particularly affecting the scalp, face, upper trunk ± perineum	Histology
Prurigo	Maculo-papular pruritic rash	Histology
Fungal nail infections	Fungal paronychia or onycholysis	Culture (of nail scrape)
Recurrent oral ulceration, noted twice or more in 6 month period	Apthous ulceration	Histology
Angular cheilitis	Splits or cracks in lips at angle of mouth	Culture
Herpes Zoster (shingles)	Painful vesicles (can be hemorrhagic) on erythematous background; typical dermatomal scar	VZV visualised by EM, histology
Recurrent upper respiratory tract infections noted twice or more in 6 month period.	Cough with purulent sputum (bronchitis); unilateral face pain with nasal discharge (sinusitis); painful red and swollen ear drum on otoscopy (otitis media); sore throat (pharyngitis).	Positive culture from appropriate specimen (except blood) with Xray where relevant: <i>Sinusitis</i> – per nasal swab and opaque sinus or fluid level on SxR; <i>Otitis</i> - ear swab of frank pus from acutely ruptured ear drum; <i>Bronchitis</i> – sputum with clear CXR; <i>Pharyngitis</i> : swab of inflamed throat
WHO STAGE 3		
Weight loss, greater than 10% body weight	Patient report of loss of weight without trying, with noticeable thinning of face, waist and extremities	Loss of greater than 10% weight without trying compared with best attained weight recorded in last 6 months
Unexplained chronic diarrhea, >1 month	Chronic diarrhea >1 month with no investigations performed	2 stools observed as unformed and 2 stool negative for pathogens – work-up to include microscopy (modified ZN and parasites) and culture
Unexplained prolonged fever (intermittent or constant), > 1 month	Patient report of fever or night sweats for >1 month (intermittent or constant) together with feeling unwell with no focus reported but no investigations performed and no response to therapy (e.g. antimalarials, antibiotics)	Continuous fever reported, documented on at least two occasions as > 38.0 C axillary within a month with no obvious disease identified; negative blood cultures (routine and AFB), negative malaria slide x 2; clear/unchanged CXR
Oral candidiasis (thrush)	Pseudomembranous – creamy white plaques often painful, not easily dislodged ; erythematous – red lesion on palate, tongue, or buccal mucosa.	Microscopy of tissue scraping Culture
Oral hairy leukoplakia	Fixed asymptomatic, white, vertical projections on the lateral borders of the tongue which do not scrape off	Histology
Pulmonary tuberculosis	Symptoms of prolonged fever, night sweats, cough, hemoptysis, weight loss or fatigue;	Symptoms, abnormal CXR plus positive culture of <i>M.tuberculosis</i> from sputum or

³ <http://www.ctu.mrc.ac.uk/studies/dart.asp>

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	abnormal CXR; ± AFB on ZN stain of sputum; and response to standard anti-TB treatment	lavage or lung tissue ± AFB seen on ZN stain of sputum
Severe bacterial infection (e.g. pneumonia, empyema, meningitis, pyomyositis, any clinically significant episode of bacteremia including single non-Typhi Salmonella episode).	Fever, specific symptoms and signs, relevant abnormal investigations (e.g. CXR) plus response to antibiotics, with either no microbiology investigations performed, or pathogen not identified	One episode of significant bacteremia: Symptoms and signs, positive relevant investigations (e.g. CXR) and either bacteria isolated from appropriate clinical specimen, bacteria seen in Gram stain (CSF, pus, aspirate, with sputum also PMNs), or antigen test positive
WHO STAGE 4		
HIV wasting syndrome, as defined by CDC	Patient report of loss of weight without trying, with noticeable thinning of face, waist and extremities PLUS chronic diarrhea >1 month but with no investigations performed OR Patient report of fever or night sweats for >1 month (intermittent or constant) together with feeling unwell with no focus reported but with no investigations performed	Loss of greater than 10% weight without trying compared with best attained weight recorded in last 6 months PLUS chronic diarrhea >1 month with 2 stools to be observed as unformed; and 2 stool negative for pathogens – work-up to include microscopy (modified ZN and parasites) and culture OR recorded temperature >37.5C on three occasions within a month with no obvious focus of disease identified; negative blood cultures (routine and AFB), negative malaria slide x 2; clear/unchanged CXR
<i>Pneumocystis carinii</i> Pneumonia	Dry cough, progressive shortness of breath with cyanosis, tachypnea and fever; abnormal chest X-ray (typical appearance of bilateral, perihilar diffuse infiltrates), response to high dose cotrimoxazole +/- prednisolone	microscopy of induced sputum or BAL or histology of lung tissue
Cerebral toxoplasmosis	Meningitis: fever with increasingly severe headache, meningismus, confusion, behavioural changes, focal neurologic signs, convulsions; serum CRAG positive.	CT scan showing single/multiple lesions with mass effect/enhancing with contrast. If LP performed, CSF non-specific or normal. Resolution of findings after treatment.
Cryptococcosis, extrapulmonary	In presence of suggestive symptoms response to to high-dose cotrimoxazole or pyrimethamine and sulfadiazine/ clindamycin therapy. Other sites include skin	CSF: microscopy (India Ink or Gram stain) positive, CRAG positive or culture positive Blood culture positive for <i>Cryptococcus neoformans</i> . Skin lesions culture or microscopy positive
Cytomegalovirus (CMV) of an organ (other than liver, spleen or lymph nodes)	Clinical diagnosis with symptoms and signs of organ involvement e.g. typical eye lesions on fundoscopy, pneumonitis, pancreatitis, colitis, cholecystitis, adrenalitis, epididymitis	Compatible symptoms, plus histology or detection of antigen from affected tissue or
Herpes simplex virus infection, mucocutaneous for > 1 month, or visceral any duration	Persistent painful mucocutaneous ulceration that is documented > 1 month; Suggestive symptoms of organ damage e.g. bronchitis, pneumonitis, esophagitis, colitis	Persistent ulceration documented > 1 month, plus histology or culture or detection of antigen from affected tissue Symptoms, plus histology or culture or detection of antigen from affected tissue
Progressive multifocal leukoencephalopathy (PML)	Progressive focal neurological signs without headache or fever, cortical blindness, cerebellar signs, dementia, rarely convulsions	Brain scan consistent with PML plus viral PCR for JCR virus
Any disseminated endemic mycosis (e.g. Histoplasmosis, Coccidioidomycosis)	Symptoms e.g. subacute fever, weight loss, malaise, pancytopenia ± pulmonary infiltrates	Symptoms, plus histology or culture or detection of antigen from affected tissues
Candidiasis of esophagus, trachea, bronchi or lungs	Dysphagia, odynophagia or retrosternal chest pain worse with eating or drinking, epigastric pain increased by food, nausea/vomiting, ± presence of oral candidiasis, response to antifungals.	Macroscopic appearance at endoscopy or by microscopy of specimen obtained directly from affected tissues Macroscopic appearance at bronchoscopy or autopsy, or histology or cytology/smear
Atypical mycobacteriosis, disseminated	Progressive weight loss, fever, night sweats, fatigue, anaemia or diarrhoea, plus AFBs seen in stool, blood, body fluid or tissue but	Compatible symptoms plus culture of atypical mycobacteria spp from stool, blood,

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	not grown on culture, and no concurrent diagnosis of TB	body fluid or other tissue, except lung
Recurrent (within one year) non-typhoid Salmonella (NTS) bacteremia.	Fever (+/- sweats, fatigue, headache, wt loss; diarrhoea can occur but is not common) without focal signs (eg pneumonia, meningitis) negative malaria slide; may have moderate splenomegaly	Positive blood culture yielding NTS
Extra pulmonary tuberculosis	Systemic illness usually with prolonged fever, night sweats, weakness and weight loss, often anemia Clinical features of the organs involved; e.g. focal lymphadenopathy, cold abscess, sterile pyuria, pericarditis, ascites, pleural effusion, meningitis, arthritis, orchitis, lupus vulgaris. Disseminated TB can be non-specific; miliary appearance on CXR can be absent Appropriate clinical features that respond to trial of anti-TB therapy	<i>M.tuberculosis</i> isolated from blood culture or any specimen except sputum or BAL Histology (eg pleural or pericardial biopsy) AFBs seen in microscopy of CSF, effusion, or lymph node aspirate Serous lymphocytic effusion (joint; pleural, peritoneal, pericardial effusion) which may be culture negative. Exudate. Lymphocytic CSF with negative CRAG and no bacterial growth
Cerebral or B-cell, non-Hodgkin's lymphoma	Symptoms consistent with lymphoma: fever, night sweats, weight loss, lymphadenopathy, splenomegaly, pancytopenia, bowel obstruction, ascites, cranial nerve, spinal cord or nerve root lesions, cutaneous, testicular or lung mass lesions; no response clinically to anti-toxoplasma or anti-TB treatment	CNS imaging: at least one lesion with mass effect on brain scan, and no response to anti-toxoplasma and anti-TB treatment Histology Response to cytotoxic chemotherapy
KS, Kaposi's sarcoma	Typical appearance with persistence in skin or oropharynx. Dense masses in lymph nodes, viscera or lungs by palpation or radiology. Otherwise unexplained lymphedema.	Histology. Typical reddish lesions seen on endoscopy bronchoscopy or sigmoidoscopy
HIV encephalopathy	Clinical finding of disabling cognitive and/or motor dysfunction interfering with activities of daily living, progressing over weeks or months in the absence of a concurrent illness or condition other than HIV infection that could explain the findings	Clinical features plus brain scan and/or lumbar puncture with CSF examination to exclude other causes