MOH/IRAQ
Directorate of Public Health
AIDS Research Center

NATIONAL HIV/AIDS PROGRAMME
2009

The National Guidelines of HIV/AIDS case definition published, in collaboration with the World Health Organization

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Ministry of health/Iraq

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Content

Acronyms and abbreviations

AIDS	Acquired immunodeficiency syndrome
CD4	T lymphocytes bearing CD4
CDC	Communicable disease center
HIV	Human immunodeficiency virus
NAP	National AIDS program
PLWHA	People living with HIV/AIDS
STIs	Sexually transmitted infections
TB	Tuberculosis
WHO	World health organization

INTRODUCTION

HIV/AIDS/STI control program is part of Iraqi Ministry of Health, established in 1987 as a response to the emergence of the first case of HIV in Iraq, when infected human products (factor VIII and IX) have been imported to the country. Since that time the program had taken the responsibility of wide range of activities concerning HIV/AIDS/STI prevention and control which include:

- Screening of risk groups, such as blood donors, TB patients, hemophilics, , STI patients, patients on hemodialysis, pre-martial couples, prisoners of sexual offence, long distance truck drivers, etc.
- Educational activities to raise awareness & knowledge towards HIV/AIDS/STI.
- Provision of medical and social care for PLWHA including financial support & free periodic medical care and assessment.
- Monitoring and Evaluation of the activities in the focal units at the provincial level.

HIV/AIDS surveillance is the cornerstone of national efforts to monitor the spread of HIV infection and to target HIV-prevention programs and health-care services . It is useful for monitoring geographical and risk-group trends and estimating the burden of HIV/AIDS-related disease .

Case definition is the basis for HIV surveillance . Since the emergence of first cases of HIV in Iraq, the NAP had adopted many case definitions derived from WHO case definitions (Bangui definition, WHO expanded definition (1987) and WHO revised case definition (1994)).

This guideline depends on WHO recent revisions for HIV case definition and clinical and immunological classification for HIV related diseases in adult and children (2007).It is delivered for health providers to reinforce ,simplify and standardize HIV/AIDS case definitions and clinical staging for both adults and children,

Case definition for HIV infection

A case of HIV infection is defined as an individual with HIV infection irrespective of clinical stage (including severe or stage 4 clinical disease, also known as AIDS) confirmed by laboratory criteria according to country definitions and requirements.

HIV infection is diagnosed basically on laboratory criteria. Clinical diagnosing (suspected or probable) of HIV infection (by diagnosing an AIDS-defining condition or HIV at any immunological stage in an adult or child) requires confirmation of HIV infection by the best age-appropriate test. Further, as maternal HIV antibody transferred passively during pregnancy can persist for as long as 18 months among children born to mothers living with HIV, positive HIV antibody test results are difficult to interpret in younger children, and alternative methods of diagnosis are recommended.

❖ Adults and children 18 months or older

HIV diagnosis is based on:
Positive HIV antibody testing (either rapid or laboratory-based enzyme immunoassay (ELIZA)). This is confirmed by a second HIV antibody test (rapid or laboratory-based enzyme immunoassay) depending on different antigens or by different operating characteristics;
and/or;
Positive virological test for HIV or its components (HIV-RNA or HIV-DNA or ultrasensitive HIV p24 antigen) confirmed by a second virological test obtained from a separate determination.

❖ Children younger than 18 months:

HIV diagnosis is based on:
positive virological test for HIV or its components (HIV-RNA or HIV-DNA or ultrasensitive HIV p24 antigen) confirmed by a second virological test obtained from a separate termination taken more than four weeks after birth1.
Positive HIV antibody testing is not recommended for definitive or confirmatory diagnosis of HIV infection in children until 18 months of age

Criteria for diagnosing advanced HIV (including AIDS) for reporting

Clinical criteria for diagnosis of advanced HIV in adults and children with confirmed HIV infection:
Presumptive or definitive diagnosis of any stage 3 or stage 4 condition.
and/or;

Immunological criteria for diagnosing advanced HIV in adults and children aged five years or older with confirmed HIV infection:
CD4 count less than 350 per mm³ of blood in an HIV-infected adult or child.
and/or;

Immunological criteria for diagnosing advanced HIV in a child younger than five years of age with confirmed HIV infection:
%CD4[*]+ <30 among those younger than 12 months;
%CD4+ <25 among those aged 12–35 months;
%CD4+ <20 among those aged 36–59 months.

Table (1) Immunological classification for established HIV infection

HIV-associated immunodeficiency	Age-related CD4 values			
	<11 months (%CD4 +)	12–35 months (%CD4 +)	36 – 59 months (%CD4 +)	>5 years (absolute number per mm or (%CD4 +)
None or not significant	>35	>30	>25	> 500
Mild	30–35	25–30	20–25	350-499
Advanced	25–29	20–24	15-19	200-349
Severe	<25	<20	<15	<200 or <15%

[*] To calculate the %CD4+, use the following formula: %CD4+ = (absolute count CD4 (mm³) times 100)/ absolute total lymphocyte count (mm3).

➢ WHO clinical staging of HIV/AIDS for adults and adolescents with confirmed HIV infection

Clinical stage 1

- Asymptomatic
- Persistent generalized lymphadenopathy

Clinical stage 2

- Moderate unexplained weight loss
- (<10% of presumed or measured body weight)
- Recurrent respiratory tract infections (sinusitis, tonsillitis, otitis media and pharyngitis)
- Herpes zoster
- Angular cheilitis
- Recurrent oral ulcerations
- Papular pruritic eruptions
- Seborrhoeic dermatitis
- Fungal nail infections

Clinical stage 3

- Unexplained severe weight loss (>10% of presumed or measured body weight)
- Unexplained chronic diarrhoea for longer than one month
- Unexplained persistent fever (above 37.6°C intermittent or constant, for longer than one month)
- Persistent oral candidiasis
- Oral hairy leukoplakia
- Pulmonary tuberculosis
- Severe bacterial infections (such as pneumonia, empyema, pyomyositis, bone or joint infection, meningitis or bacteraemia)
- Acute necrotizing ulcerative stomatitis, gingivitis or periodontitis
- Unexplained anaemia (<8 g/dl), neutropaenia (<0.5 × 109 per litre) or chronic thrombocytopaenia (<50 × 109 per litre)

Clinical stage 4

- HIV wasting syndrome
- Pneumocystis pneumonia
- Recurrent severe bacterial pneumonia
- Chronic herpes simplex infection (orolabial, genital or anorectal of more than one month's duration or visceral at any site)
- Oesophageal candidiasis (or candidiasis of trachea, bronchi or lungs)

- Extrapulmonary tuberculosis
- Kaposi's sarcoma
- Cytomegalovirus infection (retinitis or infection of other organs)
- Central nervous system toxoplasmosis
- HIV encephalopathy
- Extrapulmonary cryptococcosis including meningitis
- Disseminated non-tuberculous mycobacterial infection
- Progressive multifocal leukoencephalopathy
- Chronic cryptosporidiosis (with diarrhoea)
- Chronic isosporiasis
- Disseminated mycosis (coccidiomycosis or histoplasmosis)
- Recurrent non-typhoidal Salmonella bacteraemia
- Lymphoma (cerebral or B-cell non-Hodgkin) or other solid HIV-associated tumours
- Invasive cervical carcinoma
- Atypical disseminated leishmaniasis
- Symptomatic HIV-associated nephropathy or symptomatic HIV-associated cardiomyopathy

➢ WHO clinical staging of HIV/AIDS for children with confirmed HIV infection

Clinical stage 1

- Asymptomatic
- Persistent generalized lymphadenopathy
-

Clinical stage 2

- Unexplained persistent hepatosplenomegaly
- Papular pruritic eruptions
- Fungal nail infection
- Angular cheilitis
- Lineal gingival erythema
- Extensive wart virus infection
- Extensive molluscum contagiosum
- Recurrent oral ulcerations
- Unexplained persistent parotid enlargement
- Herpes zoster
- Recurrent or chronic upper respiratory tract infection (otitis media,otorrhoea, sinusitis or tonsillitis)

Clinical stage 3

- Unexplainedi moderate malnutrition or wasting not adequately responding to standard therapy
- Unexplained persistent diarrhoea (14 days or more)
- Unexplained persistent fever (above 37.5°C intermittent or constant, for longer than one month)
- Persistent oral candidiasis (after first 6–8 weeks of life)
- Oral hairy leukoplakia
- Acute necrotizing ulcerative gingivitis or periodontitis
- Lymph node tuberculosis
- Pulmonary tuberculosis
- Severe recurrent bacterial pneumonia
- Symptomatic lymphoid interstitial pneumonitis
- Chronic HIV-associated lung disease including brochiectasis
- Unexplained anaemia (<8 g/dl), neutropaenia (<0.5 × 109 per litre) and or chronic thrombocytopaenia (<50 × 109 per litre)

Clinical stage 4

- Unexplained severe wasting, stunting or severe malnutrition not responding to standard therapy
- Pneumocystis pneumonia
- Recurrent severe bacterial infections (such as empyema, pyomyositis, bone or joint infection or meningitis but excluding pneumonia)
- Chronic herpes simplex infection (orolabial or cutaneous of more than one month's duration or visceral at any site)
- Oesophageal candidiasis (or candidiasis of trachea, bronchi or lungs) Extrapulmonary tuberculosis
- Kaposi sarcoma
- Cytomegalovirus infection: retinitis or cytomegalovirus infection affecting another organ, with onset at age older than one month
- Central nervous system toxoplasmosis (after one month of life)
- Extrapulmonary cryptococcosis (including meningitis)
- HIV encephalopathy
- Disseminated endemic mycosis (coccidiomycosis or histoplasmosis)
- Disseminated non-tuberculous mycobacterial infection
- Chronic cryptosporidiosis (with diarrhoea)
- Chronic isosporiasis
- Cerebral or B-cell non-Hodgkin lymphoma
- Progressive multifocal leukoencephalopathy
- Symptomatic HIV-associated nephropathy or HIV-associate cardiomyopathy

Presumptive and definitive criteria for recognizing HIV clinical events in adult (15 year or older) and in children (younger than 15 years) with confirmed HIV infection

➢ *Criteria for HIV staging events in adults (15 years or older)*

Clinical event	Clinical diagnosis	Definitive diagnosis
Clinical stage 1		
Asymptomatic.	No HIV-related symptoms reported and no signs on examination.	Not applicable.
Persistent generalized lymphadenopathy.	Painless enlarged lymph nodes >1 cm in two or more non-contiguous sites (excluding inguinal) in the absence of known cause and persisting for three months or more.	Histology.
Clinical stage 2		
Unexplained moderate weight loss (<10% of body weight).	Reported unexplained involuntary weight loss. In Pregnancy, failure to gain weight.	Documented weight loss <10% of body weight.
Recurrent upper respiratory tract infections (current event plus one or more in last six-month period).	Symptom complex, such as unilateral face pain with nasal discharge (sinusitis), painful inflamed eardrum (otitis media) or tonsillopharyngitis without features of viral infection such as (coryza or cough).	Laboratory studies where available, such as culture of suitable body fluid.
Herpes zoster.	Painful vesicular rash in	Clinical diagnosis.

	dermatomal distribution of a nerve supply, does not cross the midline	
Angular cheilitis.	Splits or cracks at the angle of the mouth not due to iron or vitamin deficiency, usually respond to antifungal treatment.	Clinical diagnosis.
Recurrent oral ulceration (two or more episodes in last six months).	Aphthous ulceration, typically painful with a halo of inflammation and a yellow-grey pseudo membrane.	Clinical diagnosis.
Popular pruritic eruption.	Popular pruritic lesions, often with marked post inflammatory pigmentation.	Clinical diagnosis.
Seborrhoeic dermatitis.	Itchy scaly skin condition, particularly affecting hairy areas (scalp, axillae, upper trunk and groin).	Clinical diagnosis.
Fungal nail infection.	Paronychia (painful red and swollen nail bed) or onycholysis (separation of the nail from the nail bed) of the fingernails (white discoloration – especially involving proximal part of nail plate – with thickening and separation of the nail from the nail bed).	Fungal culture of the nail or nail plate material.
Clinical stage 3		
Unexplained severe weight loss (more than 10% of body weight).	Reported unexplained involuntary weight loss(>10% of body weight) and visible thinning of face, waist and extremities with obvious wasting or body mass index <18.5 kg/m2; in pregnancy, the weight loss may be masked.	Documented loss of more than 10% of body weight.

Unexplained chronic diarrhea for longer than one month.	Chronic diarrhea (loose or watery stools three or more times daily) reported for longer than one month.	Three or more stools observed and documented as unformed, and two or more stool tests reveal no pathogens.
Unexplained persistent fever (intermittent or constant and lasting for longer than one month).	Fever or night sweats for more than one month, either intermittent or constant with reported lack of response to antibiotics or antimalarial agents, without other obvious foci of disease reported or found on examination; malaria must be excluded in malarious areas.	Documented fever >37.5°C with negative blood culture, negative Ziehl-Nielsen stain, negative malaria slide, normal or unchanged chest X-ray and no other obvious focus infection.
Persistent oral candidiasis.	Persistent or recurring creamy white curd-like plaques that can be scraped off (pseudo membranous) or red patches on tongue, palate or lining of mouth, usually painful or tender (erythematous form).	Clinical diagnosis.
Oral hairy leukoplakia.	Fine white small linear or corrugated lesions on lateral borders of the tongue that do not scrape off.	Clinical diagnosis.
Pulmonary tuberculosis (current).	Chronic symptoms: (lasting at least 2–3 weeks) cough,haemoptysis, shortness of breath, chest pain, weight loss, fever, night sweats; PLUS EITHER positive sputum smear; OR negative sputum smear; AND compatible chest radiograph(including but not restricted to upper lobe infiltrates, cavitations, pulmonary fibrosis shrinkage. No evidence of extra pulmonary disease.	Isolation of M. Tuberculosis on sputum culture or histology of lung biopsy (with compatible symptoms).

Severe bacterial infection (such as pneumonia, meningitis, empyema, pyomyositis, bone or joint infection, bacteraemia and severe pelvic inflammatory disease).	Fever accompanied by specific symptoms or signs hat localize infection and response to appropriate antibiotic.	Isolation of bacteria from appropriate clinical specimens (usually sterile sites).
Acute necrotizing ulcerative gingivitis or necrotizing ulcerative periodontitis.	Severe pain, ulcerated gingival papillae, loosening of teeth, spontaneous bleeding, bad odour and rapid loss of bone and/or soft tissue.	Clinical diagnosis.
Unexplained anemia(<8 g/dl), neutropaenia (<0.5 × 109 per liter) or chronic (more than one month) thrombocytopenia (<50 × 109 per liter).	Not presumptive clinical diagnosis.	Diagnosed on laboratory testing and not explained by other non-HIV conditions; not responding to standard therapy with haematinics, antimalarial agents or antihelmintic agents
Clinical stage 4		
HIV wasting syndrome.	Unexplained involuntary weight loss (>10% baseline body weight), with obvious wasting or body mass index <18.5; PLUS EITHER unexplained chronic diarrhea (loose or watery stools three or more times daily) reported for longer than one month; OR reports of fever or night sweats for more than one month without other cause and lack of response to antibiotics or antimalarial agents; malaria must be excluded in malarious areas.	Documented weight loss (>10% of body weight); PLUS EITHER two or more unformed stools negative for pathogens; OR documented temperature of >37.5°C with no other cause of disease, negative blood culture, negative malaria slide and normal or unchanged chest X-ray.

Pneumocystis pneumonia.	Dyspnoea on exertion or nonproductive cough of recent onset (within the past three months), tachypnoea and fever; AND Chest X-ray evidence of diffuse bilateral interstitial infiltrates; AND No evidence of bacterial pneumonia; bilateral crepitations on auscultation with or without reduced air entry.	Cytology or immunofluorescent microscopy of induced sputum or bronchoalveolar lavage or histology of lung tissue.
Recurrent bacterial pneumonia; (this episode plus one or more episodes in last six months).	Current episode plus one or more previous episodes in the past six months; acute onset (<2 weeks) of severe symptoms (such as fever, cough, dyspnoea, and chest pain) PLUS new consolidation on clinical examination or chest X-ray; response to antibiotics.	Positive culture or antigen test of a compatible organism.
Chronic herpes simplex virus infection (orolabial, genital or anorectal) of more than one month or visceral infection of any duration.	Painful, progressive anogenital or orolabial ulceration; lesions caused by recurrence of herpes simplex virus infection and reported for more than one month. History of previous episodes. Visceral herpes simplex virus requires definitive diagnosis.	Positive culture or DNA (by polymerase chain reaction) of herpes simplex virus or compatible cytology or histology.
Oesophageal candidiasis.	Recent onset of retrosternal pain or difficulty on swallowing (food and fluids) together with oral candidiasis.	Macroscopic appearance at endoscopy or bronchoscopy, or by microscopy or histology.

Extrapulmonary tuberculosis.	Systemic illness (such as fever, night sweats, weakness and weight loss).Other evidence for extra pulmonary or disseminated tuberculosis varies by site: Pleural, pericardia, peritoneal involvement, meningitis, mediastinal or abdominal lymphadenopathy or ostetis. Discrete peripheral lymph node Mycobacterium tuberculosis infection (especially cervical) is considered a less severe form of extra pulmonary tuberculosis.	M. tuberculosis isolation or compatible histology from appropriate site or radiological evidence of miliary tuberculosis; (diffuse uniformly distributed small miliary shadows or micronodules on chest X-ray).
Kaposi sarcoma.	Typical gross appearance in skin or orpharynx of persistent, initially flat, patches with a pink or violaceous colour, skin lesions that usually develop into plaques or nodules.	Macroscopic appearance at endoscopy or bronchoscopy, or by histology.
Cytomegalovirus disease (other than liver, spleen or lymph node).	Retinitis only: may be diagnosed by experienced clinicians. Typical eye lesions on fundoscopic examination: discrete patches of retinal whitening with distinct borders, spreading centrifugally, often following blood vessels, associated with retinal vasculitis, hemorrhage and necrosis.	Compatible histology or cytomegalovirus demonstrated in cerebrospinal fluid by culture or DNA (by polymerase chain reaction).
Central nervous system toxoplasmosis.	Recent onset of a focal nervous system abnormality consistent with intracranial disease or reduced level of consciousness AND response within 10 days to specific therapy.	Positive serum toxoplasmosis antibody AND (if available) single or multiple intracranial mass lesion on neuroimaging (computed tomography or magnetic resonance imaging).

Extra pulmonary cryptococcosis (including meningitis).	Meningitis: usually sub acute, fever with increasing severe headache, meningism, confusion, behavioral changes that respond to cryptococcal therapy.	Isolation of Cryptococcus neoformans from extra pulmonary site or positive cryptococcal antigen test on cerebrospinal fluid or blood.
Disseminated nontuberculous Mycobacteria infection.	No presumptive clinical diagnosis.	Diagnosed by finding atypical mycobacterial species from stool, blood, body fluid or other body tissue, excluding the lungs.
Progressive multifocal leukoencephalopathy.	No presumptive clinical diagnosis.	Progressive nervous system disorder (cognitive dysfunction, gait/speech disorder, visual loss, limb weakness and cranial nerve palsies) together with hypodense white matter lesions on neuro-imaging or positive polyomavirus JC polymerase chain reaction on cerebrospinal fluid.
Chronic cryptosporidiosis (with diarrhea lasting more than one month).	No presumptive clinical diagnosis.	Cysts identified on modified Ziehl-Nielsen stain microscopic examination of unformed stool.
Chronic isosporiasis.	No presumptive clinical diagnosis.	Identification of Isospora.
Disseminated mycosis (coccidiomycosis or histoplasmosis).	No presumptive clinical diagnosis.	Histology, antigen detection or culture from clinical specimen or blood culture.
Recurrent non-typhoid Salmonella bacteraemia.	No presumptive clinical diagnosis.	Blood culture.
Lymphoma (cerebral or B cell non-Hodgkin).	No presumptive clinical diagnosis.	Histology of relevant specimen or, for central nervous system tumours, neuroimaging techniques.
Invasive cervical carcinoma.	No presumptive clinical diagnosis.	Histology or cytology.

Atypical disseminated leishmaniasis.	No presumptive clinical diagnosis.	Diagnosed by histology amastigotes visualized) or culture from any appropriate clinical specimen.
Symptomatic HIV-associated nephropathy.	No presumptive clinical diagnosis.	Renal biopsy.
Symptomatic HIV-associated cardiomyopathy.	No presumptive clinical diagnosis.	Cardiomegaly an evidence of poor left ventricular function confirmed by echocardiography.

➢ *Criteria for HIV staging events in* Children (younger than 1 years)

Clinical event	Clinical diagnosis	Definitive diagnosis
Clinical stage 1		
Asymptomatic.	No HIV-related symptoms reported and no clinical signs on examination.	Not applicable.
Persistent generalized lymphadenopathy.	Persistent enlarged lymph nodes >1 cm at two or more non-contiguous sites (excluding inguinal) without known cause.	Clinical diagnosis.
Clinical stage 2		
Unexplained persistent hepatosplenomegaly.	Enlarged liver and spleen without obvious cause.	Clinical diagnosis.
Papular pruritic eruptions.	Popular pruritic vesicular lesions.	Clinical diagnosis.
Fungal nail infections.	Fungal paronychia (painful, red and swollen nail bed) or onycholysis (painless separation of the nail from the nail bed). Proximal white subungual onchomycosis is uncommon without immunodeficiency.	Clinical diagnosis.
Angular cheilitis.	Splits or cracks at the angle of the mouth not attributable to iron or vitamin deficiency, and usually responding to antifungal treatment.	Clinical diagnosis.
Lineal gingival erythema.	Erythematous band that follows the contour of the free gingival line; may be associated with spontaneous bleeding.	Clinical diagnosis.

Extensive wart virus infection.	Characteristic warty skin lesions; small fleshy grainy bumps, often rough, flat on sole of feet (plantar warts); facial, more than 5% of body area or disfiguring.	Clinical diagnosis.
Extensive molluscum contagious infection.	Characteristic skin lesions: small flesh-coloured, pearly or pink, dome-shaped or umbilicated growths may be inflamed or red; facial, more than 5% of body area or disfiguring. Giant molluscum may indicate more advanced immunodeficiency.	Clinical diagnosis.
Recurrent oral ulceration.	Current event plus at least one previous episode in past six months. Aphthous ulceration, typically with a halo of inflammation and yellow-grey pseudo membrane.	Clinical diagnosis.
Unexplained persistent parotid enlargement.	Asymptomatic bilateral swelling that may spontaneously resolve and recur, in absence of other known cause, usually painless.	Clinical diagnosis.
Herpes zoster.	Painful rash with fluid-filled blisters, dermatomal distribution, can be hemorrhagic on erythematous background, and can become large and confluent. Does not cross the midline.	Clinical diagnosis.
Recurrent or chronic upper respiratory tract infection.	Current event with at least one episode in the past six months. Symptom complex; fever with unilateral face pain and nasal discharge (sinusitis) or painful swollen eardrum (otitis media), sore throat with productive cough (bronchitis), sore throat (pharyngitis) and barking	Clinical diagnosis.

	croup-like cough (laryngotracheal bronchitis). Persistent or recurrent ear discharge.	
Clinical stage 3		
Unexplained moderate malnutrition or wasting.	Weight loss: low weight-forage, up to -2 standard deviations from the mean, not explained by poor or inadequate feeding and or other infections, and not adequately responding to standard management.	Documented loss of body weight of –2 standard deviations from the mean, failure to gain weight on standard management and no other cause identified during investigation.
Unexplained persistent diarrhoea.	Unexplained persistent (14 days or more) diarrhea (loose or watery stool, three or more times daily), not responding to standard treatment.	Stools observed and documented as unformed. Culture and microscopy reveal no pathogens.
Unexplained persistent fever; (>37.5°C intermittent or constant for longer than one month).	Reports of fever or night sweats for longer than one month, either intermittent or constant, with reported lack of response to antibiotics or antimalarial agents. No other obvious foci of disease reported or found on examination. Malaria must be excluded in malarious areas.	Documented fever of >37.5°C with negative blood culture, negative malaria slide and normal or unchanged chest X-ray and no other obvious foci of disease.
Oral candidiasis; (after the first 6–8 weeks of life).	Persistent or recurring creamy white to yellow soft small plaques which can be scraped off (pseudo membranous), or red patches on tongue, palate or lining of mouth, usually painful or tender (erythematous form).	Microscopy or culture.
Oral hairy leukoplakia.	Fine small linear patches on lateral borders of tongue, generally bilaterally, that do not scrape off.	Clinical diagnosis.
Acute necrotizing ulcerative gingivitis or stomatitis, or acute necrotizing ulcerative periodontitis.	Severe pain, ulcerated gingival papillae, loosening of teeth, spontaneous bleeding, bad odour, and	Clinical diagnosis.

	rapid loss of bone and/or soft tissue.	
Lymph node tuberculosis.	Non-acute, painless “cold” enlargement of peripheral lymph nodes, localized to one region. Response to standard antituberculosis treatment in one month.	Histology or fine needle aspirate positive for Ziehl-Nielsen stain or culture.
Pulmonary tuberculosis.	Nonspecific symptoms, such as chronic cough, fever, night sweats, anorexia and weight loss. In the older child also productive cough and haemoptysis. History of contact with adults with smear-positive pulmonary tuberculosis. No response to standard broad-spectrum antibiotic treatment.	One or more sputum smear positive for acid-fast bacilli and/or radiographic abnormalities consistent with active tuberculosis and/ or culture-positive for *Mycobacterium*.
Severe recurrent bacterial pneumonia.	Cough with fast breathing, chest indrawing, nasal flaring, wheezing, and grunting. Crackles or consolidation on auscultation. Responds to course of antibiotics. Current episode plus one or more in previous six months.	Isolation of bacteria from appropriate clinical specimens (induced sputum, bronchoalveolar lavage and lung aspirate).
Symptomatic lymphocytic interstitial pneumonia.	No presumptive clinical diagnosis.	Chest X-ray: bilateral reticulonodular interstitial pulmonary infiltrates present for more than two months with no response to antibiotic treatment and no other pathogen found. Oxygen saturation persistently <90%. Cor pulmonale and increased exercise-induced fatigue. Characteristic histology.
Chronic HIV-associated lung disease (including bronchiectasis).	History of cough productive of copious amounts of purulent sputum (bronchiectasis only), with or without clubbing, halitosis, and crepitations and/or wheezes on auscultation.	Chest X-ray may show honeycomb appearance (small cysts) and/or persistent areas of opacification and/or widespread lung destruction, with fibrosis and loss of volume.

Unexplained anaemia (<8 g/ dl), neutropaenia (<0.5 × 109 per litre) and or chronic thrombocytopaenia (<50 × 109 per liter).	No presumptive clinical diagnosis.	Laboratory testing, not explained by other non-HIV conditions, not responding to standard therapy with haematinics, antimalarial agents or anthelmintic agents
Clinical stage 4		
Unexplained severe wasting, stunting or severe malnutrition not adequately responding to standard therapy.	Persistent weight loss stunting wasting or malnutrition not explained by poor or inadequate feeding, other infections and not adequately responding in two weeks to standard therapy. Visible severe wasting of muscles, with or without oedema of both feet, and/or weight-for-height of –3 standard deviations from the mean, as defined by WHO Integrated Management of Childhood Illness guidelines.	Documented weight for height or weight for age of more than –3 standard deviations from the mean with or without odema.
Pneumocystis pneumonia.	Dry cough, progressive difficulty in breathing, cyanosis, tachypnoea and fever; chest indrawing or stridor. (Severe or very severe pneumonia as in WHO Integrated Management of Childhood Illness guidelines.) Rapid onset especially in infants younger than six months of age. Response to high-dose co-trimoxazole with or without prednisolone. Chest X-ray shows typical bilateral perihilar diffuse infiltrates.	Cytology or immunofluorescent microscopy of induced sputum or bronchoalveolar lavage or histology of lung tissue.
Recurrent severe bacterial infection, such as empyema, pyomyositis, bone or joint infection or meningitis but excluding pneumonia.	Fever accompanied by specific symptoms or signs that localize infection. Responds to antibiotics. Current episode plus one or more in previous six months.	Culture of appropriate clinical specimen.

Chronic herpes simplex infection; (orolabial or cutaneous of more than one month's duration or visceral at any site).	Severe and progressive painful orolabial, genital, or anorectal lesions caused by herpes simplex virus infection present for more than one month.	Culture and/or histology.
Oesophageal candidiasis; (or candidiasis of trachea, bronchi or lungs).	Difficulty in swallowing, or pain on swallowing (food and fluids). In young children, suspect particularly if oral Candida observed and food refusal occurs and/or difficulty or crying when feeding.	Macroscopic appearance at endoscopy, microscopy of specimen from tissue or macroscopic appearance at bronchoscopy or histology.
Extra pulmonary tuberculosis.	Systemic illness usually with prolonged fever, night sweats and weight loss. Clinical features of organs involved, such as sterile pyuria, pericarditis, ascites, pleural effusion, meningitis, arthritis, orchitis, pericardial or abdominal.	Positive microscopy showing acid-fast bacilli or culture of *Mycobacterium tuberculosis* from blood or other relevant specimen except sputum or bronchoalveolar lavage. Biopsy and histology.
Kaposi sarcoma.	Typical appearance in skin or oropharynx of persistent, initially flat, patches with a pink or blood-bruise colour, skin lesions that usually develop into nodules.	Macroscopic appearance or by histology.
Cytomegalovirus retinitis or cytomegalovirus infection affecting another organ, with onset at age older than one month.	Retinitis only. Cytomegalovirus retinitis may be diagnosed by experienced clinicians: typical eye lesions on serial fundoscopic examination; discrete patches of retinal whitening with distinct borders, spreading centrifugally, often following blood vessels, associated with retinal vasculitis, haemorrhage and necrosis.	Definitive diagnosis required for other sites. Histology or cytomegalovirus demonstrated in cerebrospinal fluid by polymerase chain reaction.
Central nervous system toxoplasmosis onset after age one month.	Fever, headache, focal nervous system signs and convulsions. Usually	Computed tomography scan (or other neuroimaging) showing single or multiple

	responds within 10 days to specific therapy.	lesions with mass effect or enhancing with contrast.
Extra pulmonary cryptococcosis (including meningitis).	Meningitis: usually sub acute, fever with increasing severe headache, meningism, confusion and behavioral changes that respond to cryptococcal therapy.	Cerebrospinal fluid microscopy (India ink or Gram stain), serum or cerebrospinal fluid cryptococcal antigen test or culture.
HIV encephalopathy.	At least one of the following, progressing over at least two months in the absence of another illness: failure to attain, or loss of, developmental milestones or loss of intellectual ability; OR progressive impaired brain growth demonstrated by stagnation of head circumference; OR acquired symmetrical motor deficit accompanied by two or more of the following: paresis, pathological reflexes, ataxia and gait disturbances.	Neuroimaging demonstrating atrophy and basal ganglia calcification and excluding other causes.
Disseminated mycosis (coccidiomycosis or histoplasmosis).	No presumptive clinical diagnosis.	Histology: usually granuloma formation. Isolation: antigen detection from affected tissue; culture or microscopy from clinical specimen or blood culture.
Disseminated mycobacteriosis, other than tuberculosis.	No presumptive clinical diagnosis.	Nonspecific clinical symptoms including progressive weight loss, fever, anemia, night sweats, fatigue or diarrhea; plus culture of atypical mycobacterial species from stool, blood, body fluid or other body tissue, excluding the lung.
Chronic cryptosporidiosis; (with diarrhea).	No presumptive clinical diagnosis.	Cysts identified on modified Ziehl-Nielsen microscopic examination of unformed

		stool.
Chronic Isosporiasis.	No presumptive clinical diagnosis.	Identification of *Isospora*.
Cerebral or B-cell non-Hodgkin lymphoma.	No presumptive clinical diagnosis.	Diagnosed by central nervous system neuroimaging; histology of relevant specimen.
Progressive multifocal leukoencephalopathy.	No presumptive clinical diagnosis.	Progressive nervous system disorder (cognitive dysfunction, gait or speech disorder, visual loss, limb weakness and cranial nerve palsies) together with hypodense white matter lesions on neuroimaging or positive polyomavirus JC JCV) polymerase chain reaction on cerebrospinal fluid.
Symptomatic HIV associated nephropathy.	No presumptive clinical diagnosis.	Renal biopsy.
Symptomatic HIV associated cardiomyopathy.	No presumptive clinical diagnosis.	Cardiomegaly and evidence of poor left ventricular function confirmed by echocardiography.

PRESUMPTIVE CLINICAL STAGE 4 IN INFANTS AND CHILDREN AGED UNDER 18 MONTHS WHERE VIROLOGICAL CONFIRMATION OF HIV INFECTION IS NOT AVAILABLE

+/– oral thrush;
+/– severe pneumonia
+/– severe wasting/malnutrition
+/– severe sepsis
CD4 values, where available, may be used to guide decision-making; CD4 percentages below 25%

Other factors that support the diagnosis of clinical stage 4 HIV infection in an HIV-seropositive infant are:

• recent HIV related maternal death
• advanced HIV disease in the mother.
Confirmation of the diagnosis of HIV infection should be sought as soon as possible.

REFFERENCES

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6- http://www.who.int/hiv/strategic/surveillance/definitions/en/