



## 190.14 - Human Immunodeficiency Virus (HIV) Testing (Diagnosis)

### Other Names/Abbreviations

HIV, HIV-1, HIV-2, HIV1/2, HTLV III, Human T-cell lymphotropic virus, AIDS, Acquired immune deficiency syndrome

### Description

Diagnosis of Human Immunodeficiency Virus (HIV) infection is primarily made through the use of serologic assays. These assays take one of two forms: antibody detection assays and specific HIV antigen (p24) procedures. The antibody assays are usually enzyme immunoassays (EIA) which are used to confirm exposure of an individual's immune system to specific viral antigens. These assays may be formatted to detect HIV-1, HIV-2, or HIV-1 and 2 simultaneously and to detect both IgM and IgG. When the initial EIA test is repeatedly positive or indeterminate, an alternative test is used to confirm the specificity of the antibodies to individual viral components. The most commonly used method is the Western Blot.

The HIV-1 core antigen (p24) test detects circulating viral antigen which may be found prior to the development of antibodies and may also be present in later stages of illness in the form of recurrent or persistent antigenemia. Its prognostic utility in HIV infection has been diminished as a result of development of sensitive viral RNA assays, and its primary use today is as a routine screening tool in potential blood donors.

In several unique situations, serologic testing alone may not reliably establish an HIV infection. This may occur because the antibody response (particularly the IgG response detected by Western Blot) has not yet developed (that is, acute retroviral syndrome), or is persistently equivocal because of inherent viral antigen variability. It is also an issue in perinatal HIV infection due to transplacental passage of maternal HIV antibody. In these situations, laboratory evidence of HIV in blood by culture, antigen assays, or proviral DNA or viral RNA assays, is required to establish a definitive determination of HIV infection.

### HCPCS Codes (Alphanumeric, CPT<sup>®</sup> AMA)

Code	Description
86689	Qualitative or semiquantitative immunoassays performed by multiple step methods; HTLV or HIV antibody, confirmatory test (for example, Western Blot)
86701	Antibody; HIV-1
86702	Antibody; HIV-2
86703	Antibody; HIV-1 and HIV-2, single assay
87390	Infectious agent antigen detection by enzyme immunoassay technique, qualitative or semiquantitative, multiple step method; HIV-1
87391	Infectious agent antigen detection by enzyme immunoassay technique, qualitative or semiquantitative, multiple step method; HIV-2
87534	Infectious agent detection by nucleic acid (DNA or RNA); HIV-1, direct probe technique

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Code	Description
87535	Infectious agent detection by nucleic acid (DNA or RNA); HIV-1, amplified probe technique
87537	Infectious agent detection by nucleic acid (DNA or RNA); HIV-2, direct probe technique
87538	Infectious agent detection by nucleic acid (DNA or RNA); HIV-2, amplified probe technique

**ICD-9-CM Codes Covered by Medicare Program**

The individual ICD-9-CM codes included in code ranges in the table below can be viewed on CMS' website under Downloads: Lab Code List. The link is: <http://www.cms.gov/Medicare/Coverage/CoverageGenInfo/LabNCDsICD9.html>

Code	Description
003.1	Salmonella septicemia
007.2	Coccidiosis (Isoporiasis)
007.4	Cryptosporidiosis
007.8	Other specified protozoal intestinal diseases
010.00-010.96	Primary tuberculous infection
011.00-011.96	Pulmonary tuberculosis
012.00-012.86	Other respiratory tuberculosis
013.00-013.96	Tuberculosis of meninges---+ and central nervous system
014.00-014.86	Tuberculosis of intestines, peritoneum and mesenteric glands
015.00-015.96	Tuberculosis of bones and joints
016.00-016.96	Tuberculosis of genitourinary system
017.00-017.96	Tuberculosis of other organs
018.00-018.96	Miliary tuberculosis
027.0	Listeriosis
031.0-031.9	Diseases due to other mycobacteria
038.2	Pneumococcal septicemia
038.43	Septicemia (Pseudomonas)
039.0-039.9	Actinomycotic infections (includes Nocardia)
041.7	Pseudomonas infection
042	HIV disease (Acute retroviral syndrome, AIDS-related complex)
046.3	Progressive multifocal leukoencephalopathy
049.0-049.9	Other non-arthropod-borne viral diseases of central nervous system
052.0-052.1, 052.2, 052.7-052.8	Chickenpox (with complication)
053.0, 053.10-053.13,053.14, 053.19-053.22, 053.29, 053.71,053.79, 053.8, 053.9	Herpes zoster

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Code	Description
054.0, 054.10-054.13, 054.19, 054.2, 054.3, 054.40-054.44, 054.49, 054.5, 054.6, 054.7-054.73, 054.74, 054.79, 054.8, 054.9	Herpes simplex
055.0-055.8	Measles (with complication)
070.20-070.23	Viral hepatitis B with hepatic coma
070.30-070.33	Viral hepatitis B without mention of hepatic coma
070.41	Acute hepatitis C with hepatic coma
070.42	Hepatitis delta without mention of active hepatitis B disease with hepatic coma
070.44	Chronic hepatitis C with hepatic coma
070.49	Other specified viral hepatitis with hepatic coma
070.51	Acute hepatitis C without mention of hepatic coma
070.52	Hepatitis delta without mention of active hepatitis B disease without hepatic coma
070.54	Chronic hepatitis C without hepatic coma
070.59	Other specified viral hepatitis without hepatic coma
070.6	Unspecified viral hepatitis with hepatic coma
070.70	Unspecified viral hepatitis C without hepatic coma
070.71	Unspecified viral hepatitis C with hepatic coma
070.9	Unspecified viral hepatitis without hepatic coma
078.0	Molluscum contagiosum
078.10 – 078.19	Viral warts
078.3	Cat-scratch disease
078.5	Cytomegaloviral disease
078.88	Other specified diseases due to Chlamydiae
079.50	Retrovirus unspecified
079.51	HTLV-I
079.52	HTLV-II
079.53	Human immunodeficiency virus, type 2
079.59	Other specified Retrovirus
079.83	Parvovirus B19
079.88	Other specified chlamydial infection
079.98	Unspecified chlamydial infection
085.0-085.9	Leishmaniasis
088.0	Bartonellosis
090.0-090.9	Congenital syphilis
091.0-091.9	Early syphilis symptomatic
092.0-092.9	Early syphilis, latent
093.0-093.9	Cardiovascular syphilis
094.0-094.9	Neurosyphilis

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Code	Description
095.0-095.9	Other forms of late syphilis, with symptoms
096	Late syphilis, latent
097.0-097.9	Other and unspecified syphilis
098.0-098.89	Gonococcal infections
099.0	Chancroid
099.1	Lymphogranuloma venereum
099.2	Granuloma inguinale
099.3	Reiter's disease
099.40-099.49	Other nongonococcal urethritis
099.50-099.59	Other venereal diseases due to Chlamydia trachomatis
099.8	Other specified venereal diseases
099.9	Venereal disease, unspecified
110.1	Dermatophytosis of nail
111.0	Pityriasis versicolor
112.0-112.9	Candidiasis
114.0-114.9	Coccidioidomycosis
115.00-115.99	Histoplasmosis
116.0-116.2	Blastomycotic infection
117.3	Aspergillosis
117.5	Cryptococcosis
118	Opportunistic mycoses
127.2	Strongyloidiasis
130.0-130.9	Toxoplasmosis
131.01	Trichomonal vulvovaginitis
132.2	Phthirus pubis
133.0	Scabies
136.21	Specific infection due to acanthamoeba
136.29	Other specific infections by free-living amebae
136.3	Pneumocystosis
136.8	Other specified infectious and parasitic disease (i.e.: microsporidiosis)
176.0-176.9	Kaposi's sarcoma
180.0-180.9	Malignant neoplasm of cervix uteri
200.20-200.28	Burkitt's tumor or lymphoma
200.80-200.88	Lymphosarcoma, other named variants
201.00-201.98	Hodgkin's disease
263.0	Malnutrition of moderate degree
263.1	Malnutrition of mild degree
263.9	Unspecified protein-calorie malnutrition
280.0-280.9	Iron deficiency anemias
285.9	Anemia, unspecified
287.30-287.39	Primary thrombocytopenia

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Code	Description
288.00	Neutropenia, unspecified
288.01	Congenital neutropenia
288.02	Cyclic neutropenia
288.03	Drug induced neutropenia
288.04	Neutropenia due to infection
288.09	Other neutropenia
288.4	Hemophagocytic syndromes
288.50	Leukocytopenia, unspecified
288.51	Lymphocytopenia
288.59	Other decreased white blood cell count
288.60	Leukocytosis, unspecified
288.61	Lymphocytosis (symptomatic)
288.62	Leukemoid reaction
288.63	Monocytosis (symptomatic)
288.64	Plasmacytosis
288.65	Basophilia
288.66	Bandemia
288.69	Other elevated white blood cell count
288.8	Other specified disease of white blood cells
289.53	Neutropenic splenomegaly
294.8	Other persistent mental disorders due to conditions classified elsewhere
310.1	Personality change due to conditions classified elsewhere
322.2	Chronic meningitis
331.19	Other frontotemporal dementia
331.83	Mild cognitive impairment, so stated
336.9	Unspecified disease of spinal cord
348.30	Encephalopathy unspecified
348.39	Other encephalopathy
354.0-354.9	Mononeuritis of upper limbs and mononeuritis multiplex
356.8	Other specified idiopathic peripheral neuropathy
363.20	Chorioretinitis, unspecified
425.4	Other primary cardiomyopathies
473.0-473.9	Chronic sinusitis
481-482.41	Pneumococcal pneumonia and other bacterial pneumonia
482.42	Methicillin resistant pneumonia due to Staphylococcus aureus
482.49-482.9	Other pneumonia due to Staphylococcus, specified and unspecified
484.1	Pneumonia in cytomegalic inclusion disease
486	Pneumonia, organism unspecified
512.81	Primary spontaneous pneumothorax
512.82	Secondary spontaneous pneumothorax

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Code	Description
512.83	Chronic pneumothorax
516.8	Other specified alveolar and parietoalveolar pneumonopathies
528.2	Oral aphthae
528.6	Leukoplakia of oral mucosa
530.20-530.21	Ulcer of esophagus
530.85	Barrett's esophagus
583.9	Nephropathy with unspecified pathological lesion in kidney
588.81	Secondary hyperparathyroidism (of renal origin)
588.89	Other specified disorders resulting from impaired renal function
647.60-647.64	Other viral diseases complicating pregnancy (use for HIV I and II)
682.0-682.9	Other cellulitis and abscess
690.10-690.18	Seborrheic dermatitis
696.1	Other psoriasis
698.3	Lichenification and lichen simplex chronicus
704.8	Other specified diseases of hair and hair follicles
706.0-706.9	Diseases of sebaceous glands
780.60	Fever, unspecified
780.61	Fever presenting with conditions classified elsewhere
780.62	Postprocedural fever
780.63	Postvaccination fever
780.64	Chills (without fever)
780.65	Hypothermia not associated with low environmental temperature
780.66	Febrile nonhemolytic transfusion reaction
780.79	Other malaise and fatigue
783.21	Abnormal loss of weight
783.40	Lack of expected normal physiological development
785.6	Enlargement of lymph nodes
786.00	Respiratory abnormality, unspecified
786.05	Shortness of breath
786.2	Cough
786.30	Hemoptysis, unspecified
786.31	Acute idiopathic pulmonary hemorrhage in infants (AIPHI)
786.39	Other hemoptysis
786.4	Abnormal sputum
787.91	Diarrhea
795.71	Nonspecific serologic evidence of human immunodeficiency virus
799.4	Wasting disease
V01.71	Contact or exposure to varicella
V01.79	Contact or exposure to other viral diseases
V71.5	Rape

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## **Indications**

Diagnostic testing to establish HIV infection may be indicated when there is a strong clinical suspicion supported by one or more of the following clinical findings:

1. The patient has a documented, otherwise unexplained, AIDS-defining or AIDS-associated opportunistic infection.
2. The patient has another documented sexually transmitted disease which identifies significant risk of exposure to HIV and the potential for an early or subclinical infection.
3. The patient has documented acute or chronic hepatitis B or C infection that identifies a significant risk of exposure to HIV and the potential for an early or subclinical infection.
4. The patient has a documented AIDS-defining or AIDS-associated neoplasm.
5. The patient has a documented AIDS-associated neurologic disorder or otherwise unexplained dementia.
6. The patient has another documented AIDS-defining clinical condition, or a history of other severe, recurrent, or persistent conditions which suggest an underlying immune deficiency (for example, cutaneous or mucosal disorders).
7. The patient has otherwise unexplained generalized signs and symptoms suggestive of a chronic process with an underlying immune deficiency (for example, fever, weight loss, malaise, fatigue, chronic diarrhea, failure to thrive, chronic cough, hemoptysis, shortness of breath, or lymphadenopathy).
8. The patient has otherwise unexplained laboratory evidence of a chronic disease process with an underlying immune deficiency (for example, anemia, leukopenia, pancytopenia, lymphopenia, or low CD4+ lymphocyte count).
9. The patient has signs and symptoms of acute retroviral syndrome with fever, malaise, lymphadenopathy, and skin rash.
10. The patient has documented exposure to blood or body fluids known to be capable of transmitting HIV (for example, needlesticks and other significant blood exposures) and antiviral therapy is initiated or anticipated to be initiated.
11. The patient is undergoing treatment for rape. (HIV testing is part of the rape treatment protocol.)

## **Limitations**

1. HIV antibody testing in the United States is usually performed using HIV-1 or HIV-1/2 combination tests. HIV-2 testing is indicated if clinical circumstances suggest HIV-2 is likely (that is compatible clinical findings and HIV-1 test negative). HIV-2 testing may be indicated in areas of the country where there is greater prevalence of HIV-2 infections.
2. The Western Blot test should be performed only after documentation that the initial EIA tests are repeatedly positive or equivocal on a single sample.
3. The HIV antigen tests currently have no defined diagnostic usage.
4. Direct viral RNA detection may be performed in those situations where serologic testing does not establish a diagnosis but strong clinical suspicion persists (for example, acute retroviral syndrome, nonspecific serologic evidence of HIV, or perinatal HIV infection).
5. If initial serologic tests confirm an HIV infection, repeat testing is not indicated.

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6. If initial serologic tests are HIV EIA negative and there is no indication for confirmation of infection by viral RNA detection, the interval prior to retesting is 3-6 months.
7. Testing for evidence of HIV infection using serologic methods may be medically appropriate in situations where there is a risk of exposure to HIV. However, in the absence of a documented AIDS defining or HIV-associated disease, an HIV-associated sign or symptom, or documented exposure to a known HIV-infected source, the testing is considered by Medicare to be screening and thus is not covered by Medicare (for example, history of multiple blood component transfusions, exposure to blood or body fluids not resulting in consideration of therapy, history of transplant, history of illicit drug use, multiple sexual partners, same-sex encounters, prostitution, or contact with prostitutes).
8. The CPT Editorial Panel has issued a number of codes for infectious agent detection by direct antigen or nucleic acid probe techniques that have not yet been developed or are only being used on an investigational basis. Laboratory providers are advised to remain current on FDA-approval status for these tests.

### ***ICD-9-CM Codes That Do Not Support Medical Necessity***

Any ICD-9-CM code not listed in either of the ICD-9-CM covered or non-covered sections.

### ***Documentation Requirements***

Appropriate HCPCS/CPT code (s) must be used as described.

### ***Sources of Information***

CDC, 1993. Revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. MMWR 41 (No. RR17).

CDC, 1994. Revised classification system for human immunodeficiency virus infection in children less than 13 years of age.

CDC, 1998. Guidelines for treatment of sexually transmitted diseases. MMWR 47 (RR1):11-17.

Piatak, M., M.S. Saag, L.C. Yang, et al. 1993. High levels of HIV-1 in plasma during all stages of infection determined by competitive PCR. Science 259:1749-1754.

Rhame, R.S. 1994. Acquired immunodeficiency syndrome, p. 628-652. In Infectious Diseases; P.D. Hoeprich, M.C. Jordan, and A.R. Ronald (J.B. Lippincott Co., Philadelphia).

Vasudevachari, M.D., R.T. Davey, Jr., J.A. Metcalf, and H.C. Lane. 1997. Principles and procedures of human immunodeficiency virus serodiagnosis. In Manual of Clinical Laboratory Immunology (Fifth ed.); N.R. Rose, E.C. de Macario, J.D. Folds, H.C. Lane, and R.M. Nakamura (ASM Press, Washington, DC).