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# AIDS Medical Glossary

This is the June 1997 *Treatment Issues* featuring our newly expanded and revised Medical Glossary and Drug Chart. These listings are in strict alphabetical order. Thus, for example, "d4T" appears at the location where an entry beginning with "df" would appear.

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## A: ABT-378 through AZT



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### ABT-378

Abbott Laboratories' second generation protease inhibitor, not yet in human trials. This compound is three or four times more active against HIV than Abbott's original protease inhibitor, [ritonavir](#). ABT-378 is less susceptible to some of the drug-resistance mutations that occur with other protease inhibitors, but it is also possible for drug-resistant HIV to emerge with this compound.

### Accelerated Approval

Expedited FDA approval of a new treatment based on early surrogate marker data from clinical studies. The purpose of accelerated approval is to hasten the availability of new drugs for serious or life-threatening conditions.

### Acemannan (Carrisyn)

The potentially active ingredient in aloe vera juice. A few studies have suggested that acemannan has activity against HIV and also up-regulates [cell-mediated immunity](#).

### Acidophilus

Bacteria found in yogurt that help restore a supportive bacterial environment to an intestinal tract whose normal intestinal bacterial population ("flora") has been disturbed by disease or antibiotics. Ingesting acidophilus also may be useful in preventing candidiasis (thrush), including in the vagina.

### ACTG (AIDS Clinical Trials Group)

A network of medical centers around the country in which federally funded clinical trials are conducted to test the safety and effectiveness of experimental treatments for HIV infection and its complications. ACTG studies are sponsored by the National Institute of Allergy and Infectious Diseases (NIAID), a branch of the National Institutes of Health (NIH).

### Activity

The ability of a drug to control or inhibit a [pathogen](#). Activity may be determined in the laboratory and differs from efficacy, which is the ability of a treatment to alter the course of clinical disease.

### Acute

Refers to intense, short-term symptoms or illnesses that either resolve or evolve into long-lasting, chronic disease manifestations.

### Acute HIV Infection

See [Primary HIV Infection](#).

### Acyclovir (Zovirax)

An antiviral drug used in the treatment of herpes simplex virus 1 (fever blisters, cold sores), herpes simplex virus 2 (genital herpes) and herpes zoster (shingles). Acyclovir comes in the form of capsules or pills, ointment or injection. The drug functions as a nucleoside analog, but must be converted to an active (phosphorylated) form by the thymidine

kinase enzyme produced only by cells infected by certain herpes viruses, including varicella zoster virus (shingles) and herpes simplex-1 and -2. Acyclovir causes few side effects -- occasionally nausea, diarrhea or headaches.

### **Adefovir Dipivoxil (GS 840, bis-POM PMEA)**

The oral prodrug form of Gilead's experimental nucleotide PMEA. It is broken down into PMEA within cells. It has a very long half-life in the body, leading to a once-a-day oral dosing regimen as well as broad spectrum antiviral activity against hepatitis B and such herpes viruses as CMV and Epstein-Barr -- in addition to HIV. Adefovir is in human clinical trials for the treatment of HIV, hepatitis B and as prophylaxis for CMV.

### **Adenovirus**

A group of viruses that causes lung, stomach, intestine and eye infections. Adenoviruses are being used in research as a vector for vaccines.

### **Adherence**

The degree to which a patient follows drug schedules. A synonym for compliance.

### **Adjuvant**

In vaccines, a substance added to increase the immune response to the inoculant.

### **Adverse Event**

A toxic reaction to a medical therapy.

### **AIDS (Acquired Immunodeficiency Syndrome)**

The late stage of the illness triggered by infection with human immunodeficiency virus (HIV). According to the official definition published by the CDC, a person receives an AIDS diagnosis when he or she has a CD4 (helper T-cell) count of less than 200 and/or certain opportunistic infections common with advanced immune deficiency (see AIDS-Defining Illness).

### **AIDS-Defining Illness**

One of the serious illnesses that occurs in HIV-positive individuals and a reason for an AIDS diagnosis according to the CDC's definition of AIDS. Among these conditions are PCP, MAC, AIDS dementia complex, AIDS wasting syndrome, invasive cervical cancer, Kaposi's sarcoma and CMV retinitis.

### **AIDS Dementia Complex**

A brain disorder in people with AIDS that results in the loss of cognitive capacity, affecting the ability to function in a social or occupational setting. Its cause has not been determined exactly, but may result from HIV infection of cells in the brain or an inflammatory reaction to such infection.

### **Albendazole (Albenza)**

An FDA-approved treatment against two types of tapeworm larvae, SmithKline Beecham's albendazole is being tested as a treatment for microsporidiosis. It works by inhibiting cellular movement. Albendazole frequently impairs liver function and occasionally produces life-threatening reductions in total white blood cell count.

### **Alkaline Phosphatase**

An enzyme produced in the liver as well as in bone and other tissues. Elevated serum levels of the enzyme are indicative of liver disease, bile duct obstruction in particular.

### **Allele**

Alternate forms of a specific gene. Each allele is an individual member of a gene pair and is inherited from one parent.

### **Alopecia**

Hair loss.

### **Alpha Interferon (Roferon, Intron A)**

See [Interferon](#).

### **ALT (alanine aminotransaminase)**

A liver enzyme that plays a role in protein metabolism, like [AST](#). Elevated serum levels of ALT are a sign of liver damage from disease or drugs. ALT is also known as SGPT (serum glutamic pyruvic transaminase).

### **Alternative Medicine**

A catch-all phrase for a long list of treatments or medicinal systems, including traditional systems such as Chinese or Ayurvedic medicine as well as homeopathy, various herbals and many other miscellaneous treatments that have not been accepted by the mainstream, or Western, medical establishment. Alternative medicine may be referred to as [complementary medicine](#). The designation "alternative medicine" is not equivalent to "holistic medicine," which is a more narrow term. See [Holistic Medicine](#).

### **Amino Acid**

Any of the nitrogen-containing [organic molecules](#) that are the building blocks for proteins, including enzymes, muscles and structural molecules. The human body uses 20 of the 80 amino acids found in nature.

### **Amoebiasis**

A parasitic intestinal infection caused by tiny unicellular microorganisms called amoebas. Symptoms include diarrhea, bloating and abdominal pain.

### **Amphotericin B (Fungizone)**

An intravenous drug for treatment of cryptococcal meningitis, candidiasis, histoplasmosis and coccidiomycosis and other fungal infections. Toxicities are severe and include fevers, chills, headache, anorexia, nausea, vomiting, diarrhea, kidney damage and neutropenia. An oral form has been developed for treating oral candidiasis. A new lipid-complexed, somewhat safer, form of IV amphotericin B (brand name: Abelcet) is also now on the market.

### **Amylase**

A starch-splitting enzyme secreted by salivary glands and the pancreas to aid digestion of food. An increase in amylase serum levels may indicate pancreatitis, a possible life-threatening consequence of ddl.

### **Anabolic**

Refers to metabolic processes that build new tissue in the body. Compare catabolic.

### **Anabolic Steroid**

A synthetic steroid used to increase muscle mass and weight. Anabolic steroids are versions of the natural hormone testosterone but have fewer masculinizing, or androgenic, effects. Anabolic steroids have been used to reverse AIDS-related wasting syndrome on an individual basis, and positive trial data are slowly accumulating.

### **Analgesic**

Both noun and adjective, refers to a compound or therapy that reduces pain. Tylenol, aspirin and the opiates are examples of analgesic drugs.

### **Anaphylaxis**

A severe allergic reaction to an antigen, causing airway closure, low blood pressure and lung spasms. In the absence of treatment, this condition ultimately leads to life-threatening shock (collapse due to insufficient blood flow in the body) and death. Prompt treatment with an injection of epinephrine reverses the symptoms.

### **Androgen**

A hormone or synthetic substance with masculinizing (or androgenic ) effects, such as testosterone.

### **Anemia**

The incapacity of blood to transport enough oxygen to the body's tissues. Anemia may be caused by an abnormally low number of red blood cells or insufficient or defective hemoglobin, the protein that carries oxygen in red blood cells. It is a condition that is often caused by AZT as well as by other drugs and illnesses that suppress red blood cell production in the bone marrow.

### **Anergic**

Relating to the immune system's inability to produce a marked reaction in response to foreign antigens. For example, HIV-infected individuals who do not react to the tuberculosis skin test (see PPD) even though they have contracted a tuberculosis infection are considered to be anergic.

### **Angiogenesis**

The process of new blood vessel growth. Tumors and Kaposi's sarcoma lesions stimulate angiogenesis to supply themselves with blood.

### **Anorexia**

A lack or loss of appetite that leads to significant decline in weight.

### **Antibiotic**

An agent that kills or inhibits the growth of microorganisms, especially a compound similar to those produced by certain fungi for destroying bacteria. An antibiotic is used to combat disease and infection.

### **Antibody**

A disease-fighting protein created by the immune system, also known as immunoglobulin. Antibodies coat, mark for immune destruction or render harmless foreign matter such as bacteria, viruses or dangerous toxins. Antibodies also tag virus-infected cells, making them vulnerable to attack by the immune system. Each antibody attaches itself to a single specific chemical sequence (epitope) in an antigen.

### **Antigen**

A foreign substance, usually a protein, that stimulates an immune response. An antigen contains several subunits called epitopes that are targets of specific antibodies and cytotoxic T-lymphocytes.

## **Antigen Presenting Cell (APC)**

A cell, such as a macrophage or dendritic cell, that digests foreign bodies and exhibits the resulting pieces of the protein (antigen) on its surface in an effort to find and activate the CD4 T-helper cells responsive to that antigen.

## **Antioxidant**

A substance that prevents or reverses oxidation.

## **Antiretroviral**

A substance that stops or suppresses the activity of a retrovirus such as HIV. AZT, ddC, ddI and d4T are examples of antiretroviral drugs.

## **Antisense Drug**

A synthetic segment of DNA or RNA that locks onto a strand of DNA or RNA with a complementary sequence of nucleotides. Antisense drugs are designed to block viral genetic instructions, marking them for destruction by cellular enzymes, in order to prevent the building of new virus or the infection of new cells.

## **Aphasia**

The loss of ability to speak or understand speech.

## **Aphthous Ulcer**

A painful oral or esophageal sore of unknown cause that has a deep eroded base. Aphthous ulcers are common in people with HIV and are treated with corticosteroids or thalidomide.

## **Apoptosis**

A type of cellular suicide triggered by stimulation of particular receptors on a cell's surface. It is a metabolic process driven by cellular enzymes in which the cell's chromosomes and then the cell itself breaks down into fragments. In the immune system, apoptosis is a process that eliminates unneeded cells. Some researchers believe that accidental apoptosis may be the way that CD4 cells become depleted in HIV disease, rather than through direct killing by HIV.

## **ARC (AIDS-Related Complex)**

A stage before AIDS, with symptoms such as swollen lymph glands, long-lasting night sweats, fevers and unusual weight loss. Also commonly called symptomatic HIV infection. This term is no longer officially recognized by the CDC.

## **Armamentarium**

The collection of treatments available for a particular condition.

## **Aspergillus**

A fungus that infects the lungs, causing a disease known as aspergillosis. The infection can spread through the blood to other organs and cause lesions in the skin, ear, nasal sinuses in addition to the lungs, as well as occasionally in the bones, meninges, heart, kidneys or spleen.

## **Assay**

A test used to detect the presence and concentration of a drug, virus or other substance in bodily fluids or tissues.

## **AST (aspartate aminotransaminase)**

A liver enzyme that plays a role in protein metabolism, like ALT. Elevated serum levels of AST are a sign of liver damage from disease or drugs.

AST is also known as SGOT (serum glutamic oxaloacetic transaminase).

**Asthenia**

Weakness, debility.

**Asymptomatic**

Without signs or symptoms of disease or illness.

**Ataxia**

Lack of muscular coordination.

**Atovaquone (Mepron)**

An oral medication for mild to moderate cases of PCP as well as for salvage treatment of toxoplasmosis. A new, more absorbable liquid formulation has entered the market. Atovaquone should be used with caution with rifampin and fluconazole since these drugs can lower atovaquone blood levels.

**Atrophy**

A wasting or shrinking of cells, tissue, organs or muscle.

**Attenuated Virus**

A weakened virus strain that can no longer infect or produce disease. An attenuated virus might potentially be used as a vaccine.

**AUC (Area Under the Curve)**

A measure of total exposure or total effect, as defined by charting on a graph the change in a critical variable over a period of time and then calculating the area between the curve and the horizontal axis (which represents elapsed time from the start of the study). Blood levels of drug and viral load during treatment are two parameters frequently quantified by the AUC. See also [DAVG](#).

**Autoimmune Disease**

An ailment caused by an immune response against an individual's own tissues or cells.

**Autologous**

Referring to a naturally occurring substance derived from and used within the same individual. Compare endogenous.

**Azithromycin (Zithromax)**

An antibiotic approved for the prevention of MAC as well as treatment of chlamydia and bacterial infections of the skin and respiratory tract. It may also have activity against toxoplasmosis and cryptosporidiosis. Side effects include nausea, diarrhea, dizziness, sensitivity to sunlight and vaginal candidiasis.

**Azole**

A member of a class of antifungal drugs that includes fluconazole and itraconazole.

**AZT (Zidovudine, ZDV, Retrovir)**

A nucleoside analog used to slow replication of HIV. AZT is approved for the initial treatment of HIV infection in adults with CD4 counts less than 500 and for children over three months old. It is also approved for preventing maternal-fetal HIV transmission. These FDA-sanctioned indications are for AZT monotherapy. AZT is not very potent on its own, however. It is now most often administered in combination with other anti-HIV medications. Possible side effects include bone marrow

suppression leading to anemia, leukopenia or neutropenia, nausea, muscle weakness and headaches.

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## B: Bacteremia through Buyers' Club



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### **Bacteremia**

The presence of bacteria in the blood.

### **Bacterium (pl. Bacteria)**

A single-celled organism belonging to a primitive group of living things characterized by a lack of the distinct cellular components that exist in more advanced organisms.

### **Bactrim**

See [TMP/SMX](#).

### **Baseline**

The initial time point in a clinical trial or treatment regimen, just before someone starts to receive the treatment in question. At this reference point, measurable values such as CD4 count and viral load are recorded. Safety and efficacy of a drug are often determined by monitoring changes from the baseline values.

### **B-cell (B-lymphocyte)**

A type of [lymphocyte](#) that is a precursor to plasma cells. During infections, individual B-cell clones multiply and are transformed into plasma cells, which produce large amounts of antibodies against a particular [antigen](#) on a foreign microbe. This transformation mainly occurs through interaction with the appropriate CD4 T-helper cells.

### **bDNA (branched DNA)**

A test developed by the Chiron Corp. for measuring the amount of HIV (as well as other viruses) in blood plasma. The test uses a signal amplification technique, which creates a luminescent signal whose brightness depends on the viral RNA present. Test results are calibrated in numbers of virus particle equivalents per milliliter of plasma. bDNA is similar in results, but not in technique, to the [PCR test](#).

### **Beta Carotene**

A compound that is converted to vitamin A in the body. Beta carotene is a red-orange pigment found in dark green and yellow fruits and vegetables. It is a nontoxic source of vitamin A, which is believed to be valuable in preventing disease progression during HIV infection because it prevents [oxidation](#).

### **Beta-2 (b2) Microglobulin**

An immune system protein found in the blood. Elevated blood levels of this protein are associated with immune activation and are weakly predictive of worsening of the disease associated with HIV infection.

### **BID**

Abbreviation for bis in die, a Latin phrase meaning twice a day. A drug prescribed this way should be taken approximately every twelve hours.

### **Bilirubin**

A red pigment occurring in liver bile, blood and urine. Bilirubin is the product of the breakdown of hemoglobin in red blood cells. It is removed

from the blood and processed by the liver, which secretes it into the digestive tract via the bile. An elevated level in blood serum is an indication of liver disease or drug-induced liver impairment.

### **Bioavailability**

The extent to which an oral medication is absorbed in the digestive tract and reaches the bloodstream.

### **Biopsy**

Removal of a small piece of tissue either surgically or with a small aspiration needle for microscopic examination to determine whether a patient has a particular disease.

### **Bitter Melon (MAP-30)**

The fruit of a Chinese vine related to the cucumber. Bitter melon has been used as a treatment for diabetes, gastrointestinal complaints, some cancers and viral infections. It most recently has been tried as a treatment against HIV (administered most often by enema). Little information about efficacy or proper use is available.

### **Blinded**

See [Controlled Trial](#).

### **Blood Brain Barrier**

The protective barrier that restricts the passage of many substances from the blood vessels to the tissues of the brain. Not all drugs can cross this barrier.

### **Blood Retina Barrier**

The barrier that prevents the passage of most substances from the blood to the retina, making it difficult to treat eye disease with systematically administered medicines, e.g. pills and intravenous infusions.

### **Bodily fluids**

Refers to liquids naturally produced by the body such as urine, saliva and tears. The only bodily fluids having a high risk for transmission of HIV are blood, semen, vaginal secretions and breast milk.

### **Bone Marrow**

Soft tissue located in the cavities of bones. It is the site of blood cell production.

### **Bone Marrow Suppression**

A side effect of many anticancer and antiviral drugs, including AZT. Bone marrow suppression may lead to a decrease in red blood cells (erythrocytopenia or anemia), white blood cells (leukopenia) or platelets (thrombocytopenia). Such reductions respectively result in fatigue and weakness, bacterial infections and spontaneous or excess bleeding. See also [Myelosuppression](#).

### **Bronchitis**

A disease marked by inflammation of the bronchial tubes in the lungs.

### **Bronchoscopy**

A diagnostic examination in which a fiber optic tube is inserted in the throat to enable a doctor to see the trachea and the lungs. Bronchoscopy is often used to detect PCP.

### **Buffered**

Refers to pills that include a special substance for neutralizing stomach

acid. Drugs are buffered to reduce stomach upset or increase absorption by the intestines.

### **Burkitt's Lymphoma**

A cancerous tumor, frequently involving jaw bones, ovaries and abdominal lymph nodes. The disease is common in Africa and has been associated with Epstein-Barr virus.

### **Buyers' Club**

A nonprofit group that imports AIDS-related therapies available in other countries but not yet approved by the FDA for use in the United States. Many buyers' club products are sold abroad for purposes that are not related to AIDS or HIV infection, and their use in HIV/AIDS remains speculative.

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# C: Cachexia through Cytovene

## **Cachexia**

A general weight loss and wasting occurring in the course of a chronic disease.

## **Cancer**

Any malignant growth.

## **Candida**

A group of yeast-like fungi, in particular *Candida albicans*, that infect the mouth as well as other mucous membranes in the esophagus, intestines, vagina, throat and lungs. Oral or recurrent vaginal candida infection is an early sign of immune system deterioration.

## **Candidiasis**

An infection due to candida yeast. The symptoms of oral candidiasis (thrush) and vaginal candidiasis (formerly called monilia) include pain, itching, redness and white patches in their respective sites. Some common treatments are clotrimazole, nystatin and miconazole.

## **Carbohydrate**

An organic molecule made up solely of carbon, hydrogen and oxygen. Carbohydrates may be made up of only one or two components (mono- or disaccharides, also called "sugars") or be complex chains of individual units (polysaccharides or "starches," also the "cellulose" in plant cell walls).

## **Carcinogen**

A substance or agent that can cause the growth of cancer.

## **Catabolic**

Refers to metabolic processes that break down tissue in the body.

## **Catheter**

A semi-permanent tube usually implanted in the chest or arm for long-term, metered administration of a drug into the veins. See also both Hickman Catheter and PICC Line.

## **CCR5**

A seven-looped protein structure that normally occurs on the surface of certain immune system cells and acts as a chemokine receptor site. CCR5 is the second receptor necessary for M-tropic HIV to bind to and enter a cell. The other receptor is CD4. CCR5's natural function is to bind to the b (or CC) chemokines MIP-1a, MIP-1b and RANTES (see each individual term).

## **CD8 Cell**

A type of T-lymphocyte that bears the CD8 receptor molecule on its surface. The CD8 receptor helps cells interact with the antigen-presenting MHC class I molecules on other cells (see Major Histocompatibility Complex). Some CD8 cells recognize and kill cancerous cells and those infected by intracellular pathogens (some

bacteria, viruses and mycoplasma). These cells are called [cytotoxic T-lymphocytes](#).

## **CD4**

One of two protein structures on the surface of a human cell that allows HIV to attach, enter, and thus infect a cell. CD4 molecules are present on "CD4 cells" (helper T-lymphocytes), macrophages and dendritic cells, among others. Normally, CD4 acts as an accessory molecule, forming part of larger structures (such as the T-cell receptor) through which T-cells and other cells signal each other. In particular, it participates in the interaction between helper T-cells and the MHC class II molecules (see [Major Histocompatibility Complex](#)) on [antigen presenting cells](#).

## **CD4/CD8 Ratio**

The ratio of CD4 to CD8 cells. A common measure of immune system status that is around 1.5 [to one] in healthy individuals and falls as CD4 counts fall in persons with HIV infection.

## **CD4 Cell**

A type of T-lymphocyte involved in protecting against viral, fungal and protozoal infections. The CD4 cell modulates the immune response to an infection through a complex series of interactions with antigen presenting cells (macrophages, dendritic cells and B-cells) and those lymphocytes that directly attack foreign antigens (B-cells, again, and CD8 cells). Other names for CD4 cell are T-helper cell or helper T-cell.

## **CD4 Cell Count**

The most commonly used surrogate marker for assessing the state of the immune system. As CD4 cell count declines, the risk of developing opportunistic infections increases. The normal range for CD4 cell counts is 500 to 1500 per cubic millimeter of blood. CD4 count should be rechecked at least every six to twelve months if CD4 counts are greater than 500/mm<sup>3</sup>. If the count is lower, testing every three months is advised.

## **CD4 Percent**

The percentage of total lymphocytes made up by CD4 cells. A common measure of immune status that is about 40% in healthy individuals and is below 20% in persons with AIDS.

## **Cell Antiviral Factor (CAF)**

A so far unidentified soluble substance secreted by activated [CD8 cells](#) that inhibits HIV replication within cells.

## **Cell Lines**

Specific cell types bred in the laboratory for use in scientific experimentation.

## **Cell-Mediated Immunity (CMI)**

One type of immune system response, coordinated by Th1 cells, in which disease is controlled by specific defense cells (cytotoxic T-lymphocytes) that kill infected cells. See [Th1 Response](#).

## **Centers for Disease Control and Prevention (CDC)**

The federal public health agency serving as the center for preventing, tracking controlling and investigating the epidemiology of AIDS and other diseases.

## **Central Nervous System (CNS)**

The brain, spinal cord and the protective membranes surrounding them (the meninges).

### **Cerebrospinal Fluid (CSF)**

Fluid that bathes the brain and the spinal cord. A sample of this fluid is often removed from the body for diagnostic purposes by a lumbar puncture (spinal tap).

### **Cervical Dysplasia**

Changes in the lining cells of the cervix that may progress to cancer if not treated in time. Cervical dysplasia is detected through a [Pap smear](#).

### **Cervix**

The lower, cylindrical terminus of the uterus that juts into the vagina and contains a narrow canal connecting the upper and lower parts of a woman's reproductive tract.

### **Chancroid**

A highly contagious sexually transmitted disease caused by the *Haemophilus ducreyi* bacterium. It appears as a pimple, chancre, sore or ulcer on the skin of the genitals. The lesion arises after an incubation period of three to five days and may facilitate the transmission of HIV.

### **Chemokine**

Soluble chemical messengers that attract white blood cells to the site of infection. There are two structural categories of chemokines: alpha (CXC) and beta (CC). Examples of chemokines that interfere with HIV activity are the beta chemokines [MIP-1a](#), [MIP-1b](#), and [RANTES](#) and the chemokine [SDF-1](#) (see individual terms).

### **Chemotaxis**

The movement of cells towards a specific location where they are needed in response to the chemical stimulus of a cell receptor (see [Receptor](#)).

### **Chemotherapy**

The use of chemical agents (drugs) in the treatment of a disease. The term commonly, but not always, refers to cancer treatment.

### **Chlamydia**

The most common sexually transmitted bacterium infecting the reproductive system. Full name: *Chlamydia trachomatis*. The infection is frequently asymptomatic, but, if left untreated, can cause sterility in women.

### **Chromosome**

The thread-like structures in the nucleus (center) of a cell that carry genetic information. Each chromosome contains a double strand of twisted [DNA](#). Along each strand of DNA lie the [genes](#).

### **Chronic**

Refers to symptoms and diseases that last for an extended period of time without noticeable change.

### **Cidofovir (HPMPC, Vistide)**

Gilead Sciences' anti-CMV [nucleotide analog](#). Cidofovir is approved as systemic treatment for new or relapsing [CMV](#). Its primary advantage over [ganciclovir](#) and [foscarnet](#) is that cidofovir is administered intravenously on a weekly or a biweekly basis instead of daily, eliminating the need for

an in-dwelling catheter. Cidofovir can also be given via intraocular injections. The chief side effect of intravenous administration is kidney damage, which can be very severe. To protect the kidneys, cidofovir must be administered with [probenecid](#) and intravenous hydration.

Cidofovir should not be used at the same time as other drugs that are toxic to the kidneys or in patients with impaired kidney function. Cidofovir is being tested for activity against [KS](#) and [PML](#) (see both).

### **Cidofovir Gel (Forvade)**

Gilead's experimental gel version of cidofovir to be used for the treatment of genital warts (see [Condyloma Acuminatum](#)) and refractory genital herpes virus.

### **Cimetidine (Tagamet)**

An antiulcer drug that blocks histamine, a substance secreted by [mast cells](#) that causes the symptoms of allergy. Cimetidine has been proposed as an immune-based treatment for HIV-infection.

### **Ciprofloxacin (Cipro)**

An oral antibiotic approved for the treatment of many common bacterial infections. It is sometimes administered to treat MAC in combination with other drugs. Possible side effects include gastrointestinal upset, seizures and rash.

### **Clade**

One of the major, largely geographically isolated, HIV subtypes. Classification is based on differences in [envelope](#) protein. Clade B makes up the overwhelming majority of HIV in North America and Europe.

### **Clarithromycin (Biaxin)**

An antibiotic approved for the treatment of MAC and also used for preventing this disease in people with AIDS. Side effects include diarrhea, nausea and abnormal taste. Clarithromycin may cause severe abdominal pain at high doses.

### **Clindamycin (Cleocin)**

An approved antibiotic that may be an alternative treatment for PCP and toxoplasmosis. The most common side effect is diarrhea. Overgrowth of an intestinal bacterium called *Clostridium difficile* is responsible for diarrhea during clindamycin therapy.

### **Clinical**

Refers to physical signs and symptoms directly observable in the human body.

### **Clinical Trial**

A study done to test an experimental drug in human beings to see if it is safe and effective.

### **Clofazimine (Lamprene)**

An antileprosy agent previously combined with other drugs to treat MAC, but due to recent negative studies clofazimine is no longer recommended for MAC. Possible side effects include gastrointestinal upset, skin discoloration and rashes.

### **Clotrimazole (Lotrimin, Mycelex)**

An approved antifungal drug used primarily during HIV infection as a topical agent for oral and vaginal [candidiasis](#).

## **CMV (Cytomegalovirus)**

A herpes infection that causes serious illness in people with AIDS. CMV can develop in any part of the body but most often appears in the retina of the eye, the nervous system, the colon or the esophagus.

## **CMV Polyradiculopathy**

CMV infection of the spinal roots (the bundles of nerves coming out of the spinal cord), leading to generalized weakness and paralysis.

## **CMV Retinitis**

CMV infection of the retina. The lesions it causes lead to deterioration in vision and ultimately blindness if untreated.

## **Codon**

A three-nucleotide genetic subunit that determines which amino acid is placed at one point in a protein chain. Mutations at specific HIV codons are associated with changes in the amino acid sequence of HIV's proteins and enzymes. Such mutations help HIV evade the effects of antiviral drugs or specific immune responses.

## **Coenzyme Q10 (CoQ10)**

A substance that assists in the oxidation of nutrients within cells to create energy. It is also highly efficient at protecting internal and external cell membranes against oxidation and is sometimes proposed as a complementary therapy to combat AIDS-related conditions.

## **Cofactor**

Any agent or characteristic that enhances or activates disease progression.

## **Cohort**

A group of individuals with some characteristics in common that is the subject of a study of the epidemiology or natural course of a disease.

## **Colitis**

Inflammation of the colon, a condition that causes abdominal pain and diarrhea.

## **Colposcopy**

A procedure in which the surface of the uterine cervix is examined through a low-powered microscope for signs of cervical dysplasia or cancer. Colposcopy is a more accurate alternative to Pap smears, but requires considerably more skill to perform.

## **Combination Therapy**

Using at least two drugs simultaneously to more effectively combat a disease. See also [HAART](#).

## **Compassionate Use**

A process for providing experimental drugs on an individual basis to very sick patients who have no treatment options. Often, case-by-case approval must be obtained from the FDA for "compassionate use" of a drug. See also [Expanded Access](#), [Parallel Track](#) and [Treatment IND](#).

## **Complementary Medicine**

Nonmainstream health care provided in addition to, or instead of, standard medical practice. See also [Alternative Medicine](#).

## **Complete Blood Count (CBC)**

A screening of the most important cellular components of the blood. A CBC includes the total white blood count, counts of specific types of white blood cells, red blood cell count, hemoglobin level and platelet count.

### **Compliance**

The degree to which a patient exactly follows a particular treatment regimen. Noncompliance may jeopardize the effectiveness of a drug and lead to resistance. Adherence is an alternate term.

### **Compound Q (GLQ223)**

An extract of a Chinese wild cucumber. It is used in China to induce abortions and treat respiratory viruses. In this country, compound Q has been tested and used in the community as an anti-HIV treatment, but is now largely out of favor. Possible side effects of this intravenous medication include anaphylactic reactions and seizures.

### **Condyloma Acuminatum**

A projecting warty growth on the external genitals or the anus caused by infection with the human papillomavirus (HPV). It is usually a benign or non-cancerous growth. Condyloma acuminatum is also referred to as genital warts or verruca acuminata.

### **Conjunctivitis**

An inflammation of the conjunctiva, which constitutes the thin protective membrane on the inner surface of the eyelids.

### **Contraindication**

A condition or circumstance that prevents prescribing a certain treatment to an individual patient.

### **Control Arm**

The group of participants in a clinical trial who receive standard treatment or a placebo, against which those receiving the experimental treatment are compared.

### **Controlled Trial**

A clinical study in which one group of participants receives an experimental drug while another group receives either a placebo or an approved standard therapy. When participants do not know which group they are in, the trial is blinded. When the researchers are kept from knowing, too, then the trial is double-blinded.

### **Cortex**

The outer portion of an organ.

### **Corticosteroid**

Any steroid hormone obtained from the cortex or outer portion of the adrenal gland or any synthetic substitute for such a steroid. Corticosteroids are immunosuppressive and include prednisone, corticosterone, cortisone and aldosterone.

### **CPCRA (Community Programs for Clinical Research on AIDS)**

A branch of the NIH's Division of AIDS that supports clinical trials based on local networks of practicing physicians. These physicians collect data on their patients who are participating in a treatment trial.

### **Creatinine**

The product of the breakdown of creatine, an important molecule involved in energy transfer within muscle cells. The level of creatinine in

the blood and urine provides a measure of kidney function.

### **Cross-Resistance**

The phenomenon in which a microbe that has acquired resistance to one drug through direct exposure also turns out to have resistance to one or more other drugs to which it has not been exposed. Cross-resistance arises because the mechanism of resistance to several drugs is the same, resulting from identical genetic mutations.

### **Cryotherapy**

The use of liquid nitrogen to freeze and destroy a lesion or growth, sometimes used to induce scar formation and healing to prevent further spread of a condition (for example, warts or molluscum contagiosum).

### **Cryptococcal Meningitis**

An opportunistic infection caused by the fungus *Cryptococcus neoformans* and involving the membranes surrounding the brain and spinal cord. Symptoms may include severe headache, confusion, sensitivity to light, blurred vision, fever and speech difficulties. Left untreated, the disease can lead to coma and death. Standard treatments are amphotericin B (induction) and fluconazole (maintenance).

### **Cryptosporidiosis**

An opportunistic infection caused by the intestinal parasite *Cryptosporidium parvum*, a very common parasite in animals. Transmission occurs through ingestion of food or water contaminated with animal feces. The parasite grows in the intestines and bile ducts and causes severe, chronic diarrhea, especially in people with AIDS. There are no standard treatments, but proposed treatments include azithromycin, paromomycin (Humatin), letrozolil, nitazoxanide (NTZ), Sandostatin and various forms of concentrated cow and chicken antibodies.

### **CT Scan (Computed Tomography)**

A form of x-ray examination that utilizes a special beam to produce a detailed series of images of body sections. A CT scan is also referred to as a CAT scan.

### **Culture**

The process of growing bacteria or other cells in a special laboratory medium.

### **Curcumin**

An ingredient of the spice turmeric. Laboratory studies have suggested that curcumin inhibits HIV replication by blocking the long terminal repeat region on HIV's genes.

### **Cutaneous**

Relating to the skin.

### **CXCR-4 (Fusin)**

A seven-looped protein structure on the surface of certain immune system cells that acts as a chemokine receptor site. CXCR-4, which naturally binds to the alpha chemokine SDF-1, is the second receptor necessary for T-tropic, syncytia-inducing (see Syncytium) HIV to enter and infect a cell. The other receptor site for HIV binding and entry is CD4.

### **Cytochrome P450 (CYP)**

A family of enzymes in the liver that metabolizes drugs and other

fat-soluble substances. Certain medications, e.g. [ritonavir](#), inhibit some of the P450 enzymes, in particular P450 3A4 (CYP3A4), affecting the liver's ability to break down other drugs. This will increase blood levels of any medication taken concomitantly with a CYP inhibitor and dose adjustments will be necessary in order to prevent side effects and overdosing. Conversely, nevirapine is an example of a drug that reduces blood levels of other drugs by stimulating CYP3A4.

## **Cytokine**

One of the proteins produced by white blood cells that act as chemical messengers between cells. Cytokines can stimulate or inhibit the growth and activity of various immune cells in response to the particular type of disease present. Samples of cytokines are the various interleukins and [tumor necrosis factor](#).

## **Cytomegalovirus**

See [CMV](#).

## **Cytotoxic**

Cell-killing.

## **Cytotoxic T-Lymphocyte (CTL)**

A type of CD8 or, less often, CD4 lymphocyte that kills diseased cells infected by a specific virus or other intracellular microbe. CTLs interact with antigen bearing MHC class I molecules (see [Major Histocompatibility Complex](#)) on infected cells and have the prime role in [cell-mediated immunity](#).

## **Cytovene**

See [Ganciclovir](#).

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## D: Dapsone through Dyspnea



Vol. 11, No. 6  
June 1997

### Dapsone

An antileprosy drug used in the treatment and prophylaxis of PCP and other diseases. Possible side effects include skin rash, fever, gastrointestinal upset and destruction of red blood cells. Patients should take dapsone two hours before taking ddl since the buffer included in ddl reduces intestinal absorption of dapsone.

### Data and Safety Monitoring Board (DSMB)

An independent panel of clinical research experts responsible for the ongoing review and, when necessary, modification or termination of a clinical trial to insure the safety of participants.

### DaunoXome

A cytotoxic chemotherapy approved for first-line therapy for advanced Kaposi's sarcoma. It consists of a preparation of daunorubicin encapsulated in liposomes, which increases the drug's stability while moderating its toxicities. DaunoXome's main side effect is neutropenia, which can be managed with G-CSF (Neupogen).

### DAVG (time-averaged difference)

The average change in given variable over a particular period of time. Calculated by dividing the [AUC](#), or area under the curve, by the elapsed time since a study began. The effect of treatment on viral load is frequently expressed in terms of the DAVG.

### ddC (dideoxycytidine, zalcitabine, HIVID)

A [nucleoside analog](#) that inhibits infection of new cells by HIV. Normally of little impact on its own, ddC is FDA-approved for the treatment of HIV when used with AZT in patients with little prior exposure to the latter. It is also approved for use in combination with protease inhibitors. Possible side effects include nerve damage in the hands and feet (peripheral neuropathy) and sores in the mouth.

### ddl (didanosine, Videx)

A [nucleoside analog](#) that inhibits infection of new cells by HIV. Now FDA-approved for treating any individuals infected with HIV "when therapy is warranted." Side effects can include nerve damage in the hands and feet (peripheral neuropathy), damage to the pancreas (pancreatitis) and diarrhea.

### Delavirdine (Rescriptor)

An [NNRTI](#) now approved by the FDA for treating HIV in combination with other antiviral agents. Delavirdine is initially a potent drug, but unless HIV is held in check with the help of other concurrent drugs, the virus is able to quickly develop resistance to delavirdine. Side effects include usually temporary skin rash in 20% of patients.

### Dementia

See [AIDS Dementia Complex](#).

### Dendritic Cells

Immune cells with long, tentacle-like branches called dendrites. Among

the dendritic cells are the Langerhans cells of the skin and follicular dendritic cells in the lymph nodes. Most dendritic cells function as antigen presenting cells, although follicular dendritic cells do not.

## **Depression**

A chronic or recurrent mental state characterized by hopelessness and lack of motivation and energy. Other major symptoms include loss of appetite and either excessive or inadequate sleep.

## **Dermatitis**

Inflammation of the skin.

## **Desensitization**

Gradually increasing the dose of a medicine in order to overcome severe allergic reactions. Desensitization procedures have become popular when administering Bactrim for the first time.

## **d4T (Stavudine, Zerit)**

An anti-HIV nucleoside analog. It is FDA-approved as a substitute nucleoside analog in people with HIV who have taken AZT for prolonged periods of time. Its most common side effect is peripheral neuropathy.

## **DHEA (dehydroepiandrosterone)**

A hormone produced by the adrenal gland. Its biological role in the body is unclear. Some of it is converted into testosterone and other androgenic steroids. There have been anecdotal reports of the benefits of DHEA for a variety of conditions, but there is little hard evidence to support these claims. DHEA is readily available through buyers' clubs and health food stores.

## **Distal**

Further from the center of the body or from a central reference point.

## **DMP 266**

DuPont Merck's experimental non-nucleoside reverse transcriptase inhibitor (see NNRTI). The drug appears to be very potent in clinical trials and only needs to be taken once a day.

## **DNA (Deoxyribonucleic Acid)**

A double-stranded molecule that makes up the chromosomes in the center of a cell and that carries genetic information in the form of genes. The genetic code utilized by DNA resides in the varying sequences of the four nucleotide bases: adenine, guanine, thymine and cytosine.

## **Dose-Escalating**

Describes a preliminary clinical trial in which the amount of a drug is either periodically increased or increased with each new trial arm that is added. Used to determine how well a drug is tolerated in people and what its optimum dose might be, given the observed balance between activity and side effects.

## **Dose-Ranging**

See Dose-Escalating.

## **Double-Blinded**

Denotes a clinical trial in which neither the participants nor the doctors know who is receiving the experimental drug and who is receiving the placebo or standard comparison treatments. This method is believed to achieve the most accurate, generalizable results because neither the

doctors nor the patients can affect the observed results with their psychological biases.

### **Doxil (DOX-SL)**

A cytotoxic chemotherapy approved for refractory Kaposi's sarcoma consisting of a preparation of doxorubicin encapsulated in liposomes which deliver significantly greater quantities of doxorubicin to the KS lesions while reducing the drug's side effects. Side effects include nausea, vomiting, stomatitis, diarrhea and hair loss. Doxil causes a significant amount of neutropenia, which can be managed with G-CSF (Neupogen).

### **Drug-Drug Interaction**

The effects that occur when two or more drugs are used together. Such effects include changes of absorption in the digestive tract, changes in rate of the drugs' breakdown in the liver, new or enhanced side effects and changes in the drugs' activity.

### **DSMB**

See Data and Safety Monitoring Board.

### **DTH (Delayed-Type Hypersensitivity)**

A cell-mediated immune reaction (see [cell-mediated immunity](#)) to certain foreign antigens applied on the surface or just under the skin. The reaction, consisting of a red bump or induration (hardening), takes 24 to 48 hours to develop. DTH, which is the process involved in the reaction to poison ivy and poison oak as well as to the TB skin test, is often used in tests of immune system competence.

### **Dyspepsia**

Digestive upset, which may include flatulence, heartburn, nausea or vomiting.

### **Dysphagia**

Difficulty in swallowing.

### **Dysplasia**

Abnormal changes or growth of cells and tissues. See [Cervical Dysplasia](#).

### **Dyspnea**

Shortness of breath or difficulty in breathing.

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# E: Echinacea through Expanded Access



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## **Echinacea**

A commonly used herb for maintaining the immune system. There is evidence that use of echinacea can increase levels of TNF (tumor necrosis factor) which is often already elevated in HIV positive people and may contribute to both wasting and the replication of HIV. Little clinical trial data are available on the herb's value in HIV and AIDS.

## **Edema**

Swelling caused by an abnormal accumulation of fluid in body tissues.

## **Efficacy**

Strength or potency, effectiveness. The ability of a drug to control or cure an illness. Efficacy should be distinguished from activity, which is limited to a drug's immediate effects on the microbe triggering the disease.

## **Electrolytes**

Compounds that divide up when dissolved into electrically charged subunits (ions). Movement of these ions creates an electrical current. Electrolytes are found in varying amounts in blood plasma, tissues and cell fluids. The body must have the correct amount of the main electrolytes, including calcium, potassium and sodium, to maintain proper amounts of intracellular water, conduct nerve signals and allow for proper cellular response to cytokines and other outside stimuli. Electrolyte solutions may be used as treatment to replenish fluids and electrolytes during episodes of dehydration.

## **ELISA (Enzyme-Linked Immunosorbent Assay)**

The most common test used to detect the presence of HIV antibodies in the blood, which are indicative of ongoing HIV infection. A positive ELISA test result must be confirmed by another test called a Western Blot.

## **Encephalitis**

A brain inflammation of viral or other microbial origin. Symptoms include headaches, neck pain, fever, nausea, vomiting and nervous system problems. Several types of opportunistic infections can cause encephalitis.

## **Encephelopathy**

Progressive, degenerative brain disease.

## **Endemic**

A chronic incidence of a particular disease in a certain population or region.

## **Endocrine Gland**

One of the organs in the body that produces hormones.

## **Endogenous**

Originating within the organism in question.

## **Endometrium**

The mucous membrane that lines the uterus.

## **Endpoint**

A category of data used to compare the outcome in different arms of a clinical trial. Common endpoints are disease progression, death or alterations in such surrogate markers as CD4 count. Participants in trials are frequently removed from the randomized phase of trials when one of their endpoint values achieves a certain predefined change from baseline. He or she then receives open-label therapy (either a standard treatment or the experimental one being tested).

**Enteral**

Within or through the intestines.

**Enteric**

Pertaining to the intestines.

**Enteric Coating**

A protective coating that allows medication to pass unchanged through the stomach and into the intestines.

**Envelope**

The outer covering of a virus, sometimes called the coat.

**Enzyme**

A cellular protein whose shape allows it to hold together several other molecules in close proximity to each other. Enzymes are able in this way to induce chemical reactions in other substances with little expenditure of energy and without being changed themselves.

**Eosinophil**

A type of granulocyte thought to play a role in fighting parasites and in producing allergic reactions. Its name comes from these cells' absorption of the red dye eosin.

**Eosinophilic Folliculitis**

An inflammatory reaction around hair follicles, characterized by very itchy papules that may grow together to form plaques. The cause of this condition in people with AIDS has yet to be established, although the condition obviously involves invasion of the follicles by eosinophils. Partially successful treatment has been reported with ultraviolet light, steroids, antihistamines and itraconazole.

**Epidemiology**

The branch of medical science that studies the incidence, distribution and control of disease in a population.

**Epithelial**

Refers to the cell linings covering most internal and external surfaces of the body and its organs.

**Epitope**

A unique molecular shape or amino acid sequence carried on a microorganism that triggers a specific antibody or cellular immune response.

**Epogen**

A recombinant version of erythropoietin, a natural glycoprotein that stimulates red blood cell production. Epogen is used as a treatment for drug-related anemia, including that caused by AZT. Epogen is made by Amgen. An identical product, known as Procrit, is made by Ortho Biotech.

## **Epstein-Barr Virus (EBV)**

A herpes-like virus that causes one of the two kinds of mononucleosis (the other is caused by CMV). It infects the nose and throat and is contagious. EBV lies dormant in the lymph glands and has been associated with [Burkitt's lymphoma](#) and [oral hairy leukoplakia](#).

## **Erythrocytes**

Red blood cells. The primary function of erythrocytes is to carry oxygen to cells.

## **Erythropoietin**

A natural glycoprotein that stimulates red blood cell production. See [Epogen](#).

## **Ethambutal (Myambutal)**

An antibiotic used in combination therapy for treatment of mycobacterial infections such as TB and MAC.

## **Excipient**

An inactive, soluble binding agent for incorporating an active drug into a pill.

## **Exogenous**

Originating outside the organism in question.

## **Expanded Access**

Refers to any of the FDA procedures (including [compassionate use](#), [parallel track](#) and [treatment IND](#)) that distributes experimental drugs to patients who are failing on currently available treatments and also are unable to participate in ongoing clinical trials.

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## F: Famciclovir through Fusin



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### Famciclovir (Famvir)

A prodrug for an acyclovir-like active compound. It has especially high bioavailability and is an approved therapy for shingles and recurrent outbreaks of herpes simplex-2 (genital herpes).

### FDA (Food and Drug Administration)

An agency of the United States Department of Health and Human Services. Aside from regulating the safety of foods and cosmetics, the FDA regulates the testing of experimental drugs and approves new medical products for marketing based on evidence of safety and efficacy.

### FDC

See Follicular Dendritic Cell.

### 1592U89 (Abacavir)

Glaxo's investigational nucleoside analog. In early trials 1592U89 has demonstrated highly potent anti-HIV activity, and in lab tests it has shown strong residual potency against mutant, drug-resistant HIV.

### First-Line Treatment

The optimal starting therapy for a treatment-naive patient. Due to the potential for the development of cross-resistance by HIV and other microbes, the choice of first-line medication(s) will affect the efficacy of succeeding (second-line) therapies.

### Floater

Drifting dark spots within the field of vision. Floaters can be caused by CMV retinitis, but also can appear in persons as a normal part of the aging process.

### Fluconazole (Diflucan)

An antifungal drug that is FDA-approved for treating and preventing candidiasis in the vagina, mouth, esophagus and other parts of the body. It is also approved for treating cryptococcal meningitis and in this case is usually administered following two weeks of amphotericin B. Possible side effects include liver injury, anaphylaxis and skin peeling.

### Flucytosine (5-FC, Ancobon)

An antifungal drug that is indicated for the treatment of refractory fungal infections caused by candida and cryptococcus. In HIV-positive individuals, flucytosine is also used in combination with amphotericin B or fluconazole for treatment of cryptococcal meningitis. Possible side effects include liver damage.

### Follicle

A small body cavity with a secretory or excretory function.

### Follicular Dendritic Cell (FDC)

A virus-trapping dendritic cell found in lymph node follicles (germinal centers). See both Germinal Center and Dendritic Cell.

### Fomivirsen (ISIS 2922)

Isis Pharmaceuticals' [antisense drug](#) designed to treat CMV. It is under study as an [intraocular](#) (see) injection for CMV retinitis.

### **Foscarnet (Foscavir)**

An FDA-approved antiviral drug to treat CMV infection in the retina and elsewhere in the body. It now is also approved for acyclovir-resistant herpes simplex virus in immune deficient persons. Kidney toxicity is a serious problem with foscarnet. Other side effects include seizures, anemia, nausea and skin rashes.

### **Fovea**

A depressed region in the middle of the retina (the [macula](#)) that is responsible for detailed central vision.

### **Free Radical**

A chemically active, charged atom or complex of atoms containing an excess or deficient number of electrons. Radicals seek to transfer electrons from or to other atomic complexes in order to achieve a more stable configuration. This process can damage the large molecules within cells. See [Oxidation](#).

### **Funduscopy**

A thorough eye screening in which the pupil is dilated and the retina and the base (fundus) of the eye are examined with an ophthalmoscope for the presence of CMV retinitis or other ophthalmological problems.

### **Fungal Infection**

A range of distinct diseases caused by fungi (see [Fungus](#)). Candidiasis, cryptococcosis and histoplasmosis are examples of AIDS-related fungal infections.

### **Fungus**

One of a group of primitive, nonvascular plants lacking chlorophyll. Among the fungi are mushrooms, yeasts, rusts and molds. Some fungi are single-celled but differ from bacteria in that they have a distinct nucleus and other cellular structures. Reproduction is accomplished by spores.

### **Fusin**

See [CXCR-4](#).

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# G: Gamma Globulin through Growth Factor

## Gamma Globulin

See [Immunoglobulin G](#).

## Ganciclovir (Cytovene)

An antiviral drug sold in both intravenous and oral forms. The intravenous form is FDA-approved as treatment of CMV retinitis in immune-deficient patients. The oral form is approved for preventing CMV in patients at risk and for maintenance therapy to control existing CMV retinitis after an initial course of IV ganciclovir. As maintenance therapy, oral ganciclovir is not as effective as IV ganciclovir. Ganciclovir's main side effect is bone marrow suppression, leading to low white blood cell and platelet counts.

## Gastroenteritis

Inflammation of the stomach and intestines, which can cause abdominal pain and diarrhea.

## Gastrointestinal (GI) Tract

The organs that absorb and digest food and eliminate the waste products. The GI tract includes the mouth, esophagus, stomach, small and large intestines, colon and rectum.

## G-CSF (Granulocyte Colony Stimulating Factor) (Neupogen)

G-CSF is a natural hormone that stimulates production of [granulocytes](#), a type of white blood cell. Its synthetic form has been approved by the FDA for prevention of drug-induced [neutropenia](#).

## GEM 91

An [antisense drug](#) in early clinical trials for treating HIV infection.

## Gene

A unit of DNA in the chromosomes that determines the structure of a specific protein or enzyme. Genes regulate the metabolism of individual cells and the development and specialization of body cells and tissues.

## Gene Therapy

Any of a number of experimental treatments in which cell genes are altered or added to. As it concerns HIV, gene therapies attempt to provoke new immune activity, try to render cells resistant to infection or provoke the synthesis of enzymes that destroy viral material within cells.

## Genital Ulcer Disease (GUD)

Ulcerative lesions on the genitals, usually caused by a sexually transmitted condition such as herpes, syphilis or chancroid. The presence of genital ulcers may increase the risk of transmitting HIV.

## Genital Warts

See [Condyloma Acuminatum](#).

## Genome

An organism's entire genetic code.

## Genotype

The genetic makeup of an individual organism, determined by the

sequence of nucleotides in its genes. See also [Phenotype](#).

### **Genotypic Assay**

An experimental blood test that determines the genetic sequences of an organism. In HIV, frequently performed in order to establish whether certain mutations conferring drug resistance are present. See also both [Phenotypic Assay](#) and [Resistance](#).

### **Germinal Center**

One of a series of follicles or cavities around the periphery of lymph nodes. Germinal centers are the site of antibody production and are populated mostly by B-cells but include a few T-cells and macrophages. As HIV infection progresses, the germinal centers gradually decay.

### **Glutathione (GSH)**

A triple amino acid molecule (a tripeptide) utilized in the body as an antioxidant. It helps remove free radicals from blood and cells before they can cause oxidative damage. Glutathione also aids in the neutralization of toxins in the liver. Glutathione levels are comparatively low in people with HIV.

### **Glycoprotein**

A conjugate molecule made up of both protein and carbohydrate components.

### **Glycyrrhizin**

A substance isolated from the root of the licorice plant. Used traditionally as an anti-inflammatory and liver-protecting agent, glycyrrhizin also is thought to have anti-HIV activity. Possible adverse effects include low potassium levels and high blood pressure.

### **GM-CSF (Granulocyte-Macrophage Colony Stimulating Factor) (Leukine, Prokine)**

A hormone that stimulates production of both granulocytes and macrophages. Recombinant GM-CSF is under development as a means of alleviating the neutropenia caused by AZT and ganciclovir. It is being tested also as a general preventive of opportunistic infections.

### **Gonorrhea**

A common sexually transmitted bacterial infection. Symptoms include difficulty urinating, a greenish-yellow discharge and itching, burning or tenderness around the vagina or urethra. Ceftriaxone (brand name: Rocephin) is often used as treatment.

### **gp41**

A glycoprotein from HIV's outside envelope that complexes with gp120 to form the mechanism enabling HIV to latch onto and enter cells. gp41 uses a three-prong, harpoon-like mechanism to penetrate cell membranes.

### **gp160**

The precursor glycoprotein to both of HIV's outer envelope proteins gp41 and gp120. gp160 is divided by viral enzymes into the two envelope proteins at a late stage of viral assembly. Also refers to the gp120-gp41 complex as it exists on the outside of mature HIV.

### **gp120**

A glycoprotein on HIV's envelope that binds to the CD4 molecules and chemokine receptors on cells' outside membrane. Free gp120 in the body may be toxic to cells in its own right, causing CD4 cell depletion in

the immune system through [apoptosis](#) and neurological damage leading to [AIDS dementia complex](#).

### **Granulocyte**

A type of white blood cell filled with sacs containing compounds that digest microorganisms. Granulocytes are part of the innate [immune system](#) and have broad-based activity. They do not respond only to specific antigens as do B-cells and T-cells. Basophils, eosinophils and neutrophils are all granulocytes.

### **Granulocyte Colony Stimulating Factor**

See [G-CSF](#).

### **Granulocytopenia**

An abnormally low number of granulocytes in the blood, which increases risk of severe bacterial infection.

### **Growth Factor**

One of many intercellular regulatory molecules that affects cell proliferation and maturation in various tissues.

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# H: HAART through Hyperthermia



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## HAART (Highly Active Antiretroviral Therapy)

Aggressive anti-HIV treatment usually including a combination of protease and reverse transcriptase inhibitors whose purpose is to reduce viral load to undetectable levels.

## Half-Life

The amount of time required for half of a given substance (such as a drug) or half the current population of a given cell type to be eliminated from the body.

## Helper T-cell

See CD4 cell.

## Hematocrit

Percent, by volume, of red blood cells in a particular amount of blood. The volume of red blood cells is obtained by separating the cells from other blood components by means of a centrifuge.

## Hematuria

Red blood cells in the urine.

## Hemiparesis

Paralysis on one side of the body.

## Hemoglobin

The iron-containing protein in red blood cells that carries oxygen through the bloodstream.

## Hemolysis

Destruction of the red blood cells.

## Hemophilia

A genetic disorder that affects mostly men and prevents normal blood clotting. It is treated by life-long injections of a synthetic version of the clotting factor lacking in people with the disease. (The new recombinant clotting factor replaces the natural product, which was extracted from people's blood and, when not heat-treated, could carry HIV.)

## Hemorrhage

Internal bleeding through ruptured or unruptured blood vessel walls.

## Heparin

A chemical that prevents the blood from clotting.

## Hepatic

Refers to the liver.

## Hepatitis

Inflammation of the liver caused by microbes or chemicals. Often accompanied by jaundice, enlarged liver, fever, fatigue and nausea and high levels of liver enzymes in the blood.

## Hepatitis A

A self-limiting virus-induced liver disease. Hepatitis A is acquired through

ingesting fecally contaminated water or food or engaging in sexual practices involving anal contact. Injection drug users who share unclean needles also are at risk.

### **Hepatitis B**

A virus-induced liver disease that usually lasts no more than six months, but becomes chronic and life-threatening in 10% of the cases. The highly contagious hepatitis B virus can be transmitted through sexual contact, contaminated syringes and blood transfusions.

### **Hepatitis C**

Another virus-induced liver disease. It appears to be more common among heterosexuals and injection drug users than hepatitis B. It is more likely than hepatitis B to become chronic and lead to liver degeneration (cirrhosis).

### **Hepatomegaly**

Liver enlargement.

### **Hepatotoxicity**

Toxicity affecting the liver.

### **Herpes Virus**

A group of viruses that includes herpes simplex type 1 (HSV-1), herpes simplex type 2 (HSV-2), [cytomegalovirus](#) (CMV), [Epstein-Barr virus](#) (EBV), [varicella zoster virus](#) (VZV), human herpes virus type 6 (HHV-6) and KS herpes virus ([HHV-8](#)). Herpes simplex virus 1 (HSV-1) can cause painful "cold sores" or "fever blisters" on the lips, in the mouth or around the eyes; herpes simplex virus 2 (HSV-2) is usually transmitted sexually and generally causes lesions in the anus or the genital area. See names of individual viruses.

### **Herpes Zoster**

See both [Shingles](#) and [Varicella Zoster Virus](#).

### **HHV-8 (KSHV, KS Herpes Virus)**

A herpes virus thought to trigger the development of [Kaposi's Sarcoma](#) lesions. HHV-8's mode of transmission has not been determined.

### **Hickman Catheter**

A flexible tube that can be surgically inserted into a large vein and left in place for a long period of time. Used to administer drugs such as foscarnet and amphotericin, which must be regularly and slowly introduced into the body but cannot be taken orally.

### **Histoplasmosis**

An opportunistic infection caused by a fungus infection acquired by inhaling spores of the fungus *Histoplasma capsulatum* present in soil or dust. The fungus is widespread only in the south-central United States and Latin America. The disease can cause fever, skin lesions, anemia and respiratory distress. Histoplasmosis outside the lungs is an [AIDS-defining illness](#). Amphotericin B and itraconazole are approved treatments.

### **HIVIG**

See [Passive Immunotherapy](#).

### **HIV-1 (human immunodeficiency virus type 1)**

The [retrovirus](#) recognized as the agent that induces AIDS.

## **HIV-2 (human immunodeficiency virus type 2)**

A virus closely related to HIV-1 that also leads to immune suppression. HIV-2 is not as virulent as HIV-1 and is epidemic only in West Africa.

## **Hodgkin's Disease**

A progressive malignant cancer of the lymphatic system. Symptoms include swollen lymph glands, spleen and liver, wasting, weakness, fever, itching, night sweats and anemia. Treatment includes radiation and chemotherapy.

## **Holistic (Wholistic) Medicine**

Various systems of health protection and restoration, both traditional and modern, that are reputedly based on the body's natural healing powers, the various ways the different tissues affect one another and the influence of the external environment.

## **Home-Based HIV Testing Kits (Confide, Home Access)**

FDA-approved over-the-counter test kits available in pharmacies and by mail order. The kit is not actually used for home testing, but, rather, for home collection of samples. Purchasers send a small blood sample to the manufacturer for HIV-testing and then phone anonymously for their test results.

## **Hormone**

An active chemical substance formed in one part of the body and carried in the blood to other parts of the body where it stimulates or suppresses cell and tissue activity.

## **Host**

A plant or animal that supports the growth of a parasite or infectious organism.

## **HPMPC**

See [Cidofovir](#).

## **HPV (Human Papillomavirus)**

A member of the papova family of viruses. HPV causes warts or nipple-like protrusions on the skin. HPV has also been associated with cervical cancer in woman as well as anal cancer in either sex.

## **Human Growth Hormone (HGH)**

A peptide hormone secreted by the anterior pituitary gland in the brain. HGH enhances tissue growth by stimulating protein formation. Recombinant, or genetically engineered, HGH (Serostim, produced by Serono Laboratories) is approved as a treatment to reverse AIDS-related [wasting syndrome](#).

## **Humoral Immunity**

The antibody-producing branch of the immune system, the result of stimulation of B-cells and Th3 T-helper (CD4) cells. See [Th3 Response](#).

## **Hydroxyurea (Hydrea)**

An approved oral chemotherapeutic agent for leukemia and ovarian cancer. It is an experimental anti-HIV treatment. Hydroxyurea blocks the action of the cellular enzyme ribonucleotide reductase, which helps produce the nucleotides needed for DNA formation. By reducing the amount of functioning nucleotides, the compound makes intracellular HIV more sensitive to the defective [Nucleoside Analogs](#). Hydroxyurea has been found to be particularly synergistic with ddI in lab tests. Adverse

reactions primarily involve [bone marrow suppression](#).

### **Hypergammaglobulinemia**

Abnormally high blood levels of immunoglobulins (antibodies).

### **Hypericin**

A compound derived from the herb St. John's wort. It is an experimental treatment for HIV and human papillomavirus (HPV). Hypericin inhibits the assembly and shedding of virus particles in infected cells. A synthetic version has been developed. Hypericin's main side effect is extreme photosensitivity.

### **Hyperplasia**

Excessive growth of nonmalignant cells.

### **Hypertension**

High blood pressure.

### **Hyperthermia**

An experimental procedure that involves temporarily heating patients' body core to temperatures of up to 108° F on the theory that this temperature kills free HIV and HIV-containing cells. One method for accomplishing this is by passing patients' blood through an external heater. This is called extracorporeal whole body hyperthermia.

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# I: Inhibitory Concentration through IVIG



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## IC (Inhibitory Concentration)

The amount of drug in the blood needed to suppress the reproduction of a microbe to a certain extent. For example, the IC90 is the drug level needed to block 90% of the target microbe's normal replication.

## IL-4 (Interleukin-4)

A cytokine secreted by Th3 CD4 cells that promotes antibody production by stimulating B-cells to proliferate and mature. See also Interleukin.

## IL-1 (Interleukin-1)

A cytokine that is released early in an immune system response by monocytes and macrophages. It stimulates T-cell proliferation and protein synthesis. Another effect of IL-1 is that it causes fever. See also Interleukin.

## IL-10 (Interleukin-10)

A cytokine released by Th3 CD4 cells. IL-10 reduces elevated levels of HIV-stimulating cytokines (see Proinflammatory Cytokines, TNF) and the inflammatory activity common to infection. IL-10 is in clinical trials for treatment of proinflammatory diseases such as rheumatoid arthritis and is one of the cytokines under investigation for treatment of HIV. See also Interleukin.

## IL-12 (Interleukin-12)

A cytokine released by macrophages in response to infection that promotes the activation of cell-mediated immunity. Specifically, IL-12 triggers the maturation of Th1 CD4 cells, specific cytotoxic T-lymphocyte responses and an increase in the activity of NK cells. IL-12 is under study as an immunotherapy in HIV infection. See also Interleukin.

## IL-2 (Interleukin-2)

A cytokine secreted by Th1 CD4 cells to stimulate CD8 cytotoxic T-lymphocytes. IL-2 also increases the proliferation and maturation of the CD4 cells themselves. During HIV infection, IL-2 production gradually declines. Use of IL-2 therapy is under study as a way to raise CD4 cell counts and restore immune function. See also Interleukin.

## IM

See Intramuscular.

## Immune-Based Therapy (IBT)

Anti-HIV treatment that aims to modulate, supplement or extend the body's immune responses against HIV infection or other diseases. Also called immunotherapy. Examples of experimental immunotherapies for HIV include passive immunotherapy therapy (PIT), IL-2 and therapeutic vaccines (see individual entries).

## Immune Deficiency

A breakdown or inability of certain parts of the immune system to function, thus making a person susceptible to certain diseases that they

would not have contracted with a healthy immune system. Immune deficiencies may be temporary or permanent and be triggered by genetic mutation, therapy with immune-suppressive drugs (as during organ transplants) or an infection such as HIV.

### **Immune Reconstitution**

The natural or therapy-induced revival of immune function in a body damaged by HIV infection, particularly after initiation of a highly potent antiviral therapy.

### **Immune System**

The body's complicated natural defense against disruption caused by invading microbes and cancers. There are two aspects of the immune system's response to disease: innate and acquired. The innate part of the response is mobilized very quickly in response to infection and does not depend on recognizing specific proteins or antigens foreign to an individual's normal tissue. It includes complement, macrophages, dendritic cells and granulocytes. The acquired, or learned, immune response arises when dendritic cells and macrophages present pieces of antigen to lymphocytes, which are genetically programmed to recognize very specific amino acid sequences (epitopes). The ultimate result is the creation of cloned populations of antibody-producing B-cells and cytotoxic T-lymphocytes primed to respond to a unique pathogen.

### **Immune Thrombocytopenic Purpura (ITP)**

An immune disorder that results in a low number of platelets in the blood. A common disorder in people with HIV, it often resolves as immune deficiency worsens. HIV-related ITP usually does not have serious consequences. Its cause has not been definitely determined, but probably has to do with the large number of antibody-antigen complexes sponged up by platelets; antibody-coated platelets are destroyed in the spleen. Treatment with AZT frequently alleviates the condition. WinRho is a newer FDA-approved therapy for ITP. It is a special antibody preparation (see IVIG) normally used to prevent Rh-negative blood type mothers from developing immune responses against Rh-positive fetuses.

### **Immunization**

The process of protecting an individual against communicable diseases by injecting weakened or killed infectious organisms into the body to cause the immune system to produce antibodies and activate T-cells against the organism without causing the full-blown disease.

### **Immunocompetent**

Refers to an immune system capable of developing a normal protective response when confronted with invading microbes or cancer.

### **Immunocompromised**

Refers to an immune system in which the response to infections and tumors is subnormal.

### **Immunoglobulin (Ig)**

A general term for antibodies, which bind onto invading organisms, leading to their destruction. There are five classes: IgA, IgD, IgM, IgE, IgG.

### **Immunoglobulin A (IgA)**

An immunoglobulin found in bodily fluids such as tears and saliva and in the respiratory, reproductive, urinary and gastrointestinal tracts. IgA protects the body's mucosal surfaces from infection.

## **Immunoglobulin G (IgG)**

The prominent type of immunoglobulin existing in the blood. Also called gamma globulin.

## **Immunomodulator**

A drug such as [IL-2](#) that alters, suppresses or strengthens the body's immune system.

## **Immunosuppression**

Weakening of the immune response that occurs with HIV infection as well as with some antiviral or anticancer treatments.

## **Immunotherapy**

See [Immune-Based Therapy](#).

## **Incidence**

The rate at which new cases of a disease occur, reported in a specified population over a period of time. See also [Prevalence](#).

## **Indication**

Purpose for which a drug is prescribed. The FDA-approved indications appear on a printed insert included in the manufacturer's drug packaging.

## **Indinavir (Crixivan)**

Merck & Company's [protease inhibitor](#). Indinavir must be taken every eight hours on an empty stomach. Small kidney stones or [nephrolithiasis](#) are a possible side effect, and patients are advised to drink 48 ounces of liquids per day to minimize the risk of developing stones.

## **IND Status**

See [Investigational New Drug](#).

## **Induction Therapy**

The initial, concentrated phase of a particular treatment. See also [Maintenance Therapy](#).

## **Inflammation**

The body's response to tissue injury or infection, mainly localized in the affected tissues and adjacent blood vessels. Blood vessels' permeability is increased, and the area becomes heavily populated with white blood cells. Signs of inflammation are redness, swelling, pain and sometimes loss of function. Not all of these signs are necessarily present in any given case.

## **Informed Consent**

The ability of people receiving experimental therapies to make competent decisions about their medical care. Patients are provided with an "informed consent form" which indicates the potential risks, benefits and alternatives to the therapy in question. If a clinical trial is involved, the trial [protocol](#) also is outlined, especially what participants will experience. After reading the informed consent form, individuals sign it to indicate that they understand its contents and agree to proceed with therapy under the conditions it outlines.

## **Infusion**

The process of administering a medication to an individual by slowly injecting a dilute solution of the compound into a vein. Infusions are often used when the digestive system does not absorb appreciable quantities

of a drug that is also too bulky or too toxic to be given by quick injection.

### **Institutional Review Board (IRB)**

A regulating committee composed of internal staff, hospital affiliates and community members which reviews and approves all human trials conducted within a particular hospital or research center. The IRB ensures that a trial is conducted in an ethical manner, with proper protection of human subjects.

### **Integrase**

The HIV enzyme that inserts HIV's genes into a cell's normal DNA. Integrase operates after [reverse transcriptase](#) has created a DNA version of the RNA form of HIV genes present in virus particles. Drugs that block the action of integrase are under development.

### **Interferon (IFN)**

One of a number of antiviral proteins that modulates the immune response. Interferon alpha (IFN $\alpha$ ) is secreted by a virally infected cell and strengthens the defenses of nearby uninfected cells. A manufactured version of IFN $\alpha$  (trade names: Roferon, Intron A) is an FDA-approved treatment for KS, hepatitis B virus and hepatitis C virus. Interferon gamma (IFN $\gamma$ ) is synthesized by immune system cells (NK cells and CD4 cells). It activates macrophages and helps orient the immune system to a mode that promotes cellular immunity. See [Th1](#) Response.

### **Interim Analysis**

An intermediary analysis of clinical trial data, performed at a point at which enough data have been gathered to derive preliminary, but not necessarily complete, conclusions. Interim analyses are performed to see whether continuation of a clinical trial is warranted.

### **Interleukin**

One of a large group of glycoproteins that acts as [cytokines](#). The interleukins are secreted by and affect many different cells in the immune system. See also [IL-1](#), [IL-2](#) and [IL-4](#).

### **Intolerant**

Unable to take a drug because of an adverse reaction (side effect).

### **Intralesional**

Injected directly into a lesion.

### **Intramuscular (IM)**

Injected directly into a muscle.

### **Intraocular**

Injected into the eye.

### **Intraocular Implant (Vitrasert)**

Chiron Vision's eye implant which is FDA-approved for the treatment of CMV retinitis. The implant is a five to eight month time-release device containing [ganciclovir](#) that is placed inside the eye during a short surgical procedure. The implant is more effective at treating CMV retinitis than systemic therapies because it is able to deliver medication directly to the site of the infection, bypassing the [blood-retina barrier](#). Possible side effects include temporary blurring of vision after the operation and [retinal detachments](#). The implant cannot prevent CMV in other parts of the body or the other eye.

**Intrapartum**

During birth.

**Intrathecal**

Injected directly into the membrane surrounding the spinal canal.

**Intravenous (IV)**

Injected directly into a vein.

**Intravenous Immunoglobulin (IVIG)**

A sterile solution of concentrated antibodies extracted from healthy people. IVIG is used to prevent bacterial infections in patients with low or inappropriate antibody production. It is also used to restore low platelet counts (see [Immune Thrombocytopenic Purpura](#)).

**Intravitreal**

Injected into the eye's [vitreous humor](#) between the lens and the retina.

**In Utero**

Latin term for "in the uterus." Refers to events that occur in the womb during pregnancy.

**Investigational New Drug (IND)**

Status given an experimental drug after the FDA approves an application for testing it in people.

**In Vitro**

Refers to laboratory experiments conducted in cell cultures grown in an artificial environment, for example in a test tube or culture plate.

**In Vivo**

Refers to studies conducted within humans or animals, in a living, natural environment.

**ISIS 2922**

See [Fomivirsen](#).

**Isolate**

A genetically homogeneous HIV clone with distinguishing characteristics and extracted from a single source.

**Isoniazid (INH)**

An orally administered drug used to eliminate tuberculosis infection in people without active disease. INH is also administered in combination with other drugs to treat active tuberculosis. Side effects include liver impairment and [peripheral neuropathy](#).

**-itis**

A suffix that indicates inflammation, usually due to infection, of the root word. For example, vaginitis means inflammation of the vagina.

**ITP**

See [Immune Thrombocytopenic Purpura](#).

**Itraconazole (Sporanox)**

An oral antifungal drug used for a number of AIDS-related fungal infections. Itraconazole concentrates in the skin and is particularly effective for skin conditions. Possible side effects include digestive upset, rashes and headaches. A liquid form is FDA-approved for oral and esophageal candidiasis.

**IV**

See [Intravenous](#).

**IVIG**

See [Intravenous Immunoglobulin](#).

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# J-K: Jaundice through KS

## Jaundice

Yellow pigmentation of the skin and whites of the eyes caused by elevated blood levels of [bilirubin](#). The condition is associated with liver or gallbladder disease or excessive destruction of red blood cells.

## JC Virus

See [PML](#).

## Kaplan-Meier Curve

A common mechanism for graphically analyzing a therapy's efficacy. The Kaplan-Meier curve displays a statistical estimate of the percent of people receiving a given therapeutic regimen who, at each observation point after entering a trial, continue to do acceptably well on their assigned therapy. Plotting the curves for a trial's different treatment arms on the same chart yields a comparison of the various regimens. The chart allows researchers to compare people who enter a study at different times.

## Kaposi's Sarcoma (KS)

An AIDS-defining illness consisting of individual cancerous lesions caused by an overgrowth of blood vessels. KS typically appears as pink or purple painless spots or nodules on the surface of the skin or oral cavity. KS also can occur internally, especially in the intestines, lymph nodes and lungs, and in this case is life-threatening. There has been considerable speculation that KS is not a spontaneous cancer but is sparked by a virus. The evidence is mounting that a species of herpes virus similar to Epstein-Barr virus at least triggers the process that creates KS lesions (see [HHV-8](#)). Up to now, KS has been treated with alpha interferon, radiation therapy (outside the oral cavity), and various systemic and intralesional cancer chemotherapies. Possible antiviral remedies, such as [cidofovir](#) and [foscarnet](#), are now being examined as well.

## Karnofsky Performance Score

A scale for analyzing a patient's ability to perform certain ordinary tasks: 100 —normal; no complaints; 70 —unable to carry on normal activity; 50 —requires considerable assistance; 40 —disabled; 30 —hospitalization recommended.

## K Cell

A type of nonspecific lymphocyte that seeks out and kills any cells coated with any antibody. (The cells become coated because they are infected with virus and contain viral proteins on their surface membranes.)

## Ketoconazole (Nizoral)

An antifungal medication available in pill and liquid form that is effective against a variety of fungal infections such as oral, vaginal and esophageal thrush and cryptococcosis. Persons taking ketoconazole must have their liver function tested periodically because of the slight danger of serious liver damage.

## Kidney Stone

A painful solid mass in the kidney or urinary system, caused by the

solidification or precipitation of a dissolved substance in the urine.

### **Killer Cell**

A generalized name for immune system cells that kill cancerous and virus-infected cells. Among the killer cells are killer T-cells ([cytotoxic T-lymphocytes](#)), [NK \(natural killer\) cells](#) and [K cells](#). See all three entries.

### **Killer T-Cell**

See [Cytotoxic T-Lymphocyte](#).

### **KS**

See [Kaposi's Sarcoma](#).

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# L: Lactose Intolerance through Lysis



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## Lactose Intolerance

The inability to digest milk products due to the lack of the enzyme lactase, which breaks down milk sugar (lactose).

## Langerhans Cell

The type of dendritic cell found in the skin. See [Dendritic Cell](#).

## Latency

A quiescent period during a disease process. Clinical latency is an asymptomatic period in the early years of HIV infection. The period of latency is characterized in the peripheral blood by stable, slightly depressed CD4 counts and low HIV levels. Recent research indicates that HIV remains quite active in the lymph nodes during this period. Cellular latency is a period that exists in some cells after HIV has integrated its [genome](#) into the cell's DNA but has not yet begun to replicate.

## Lavage

The process of washing out an internal organ or cavity for treatment or to obtain a sample.

## L-Carnitine

A naturally occurring cell constituent that modulates fat metabolism, in particular the mitochondrial intake of lipid derivatives. L-carnitine has been proposed as a treatment for AIDS-related wasting and the [myopathy](#) associated with AZT.

## Lentivirus

A subgroup of the retrovirus family that includes HIV and is characterized by long periods of clinical latency after infection.

## Lesion

A disturbed area of tissue -- a wound, injury, nodule or tumor on the skin or elsewhere.

## Leukocyte

Any of the various white blood cells, which together make up the immune system. Neutrophils, lymphocytes and monocytes are all leukocytes.

## Leukocytosis

An abnormally high number of leukocytes in the blood. This condition can occur during many types of infection and inflammation.

## Leukopenia

An abnormally low number of total leukocytes circulating in the blood, frequently the result of drug-induced bone marrow suppression.

## Licorice

See [Glycyrrhizin](#).

## Ligand

Any molecule that binds to the surface of another molecule, such as an

immune cell receptor. For examples of receptors see [CCR5](#), [CXCR-4](#), [CD4](#).

### **Limit of Detection (Limit of Quantification)**

Refers to the sensitivity of a quantitative diagnostic test, such as the viral load assay. The limit of detection is the level below which the test can no longer accurately measure the amount of a substance, such as HIV RNA. If a person has an "undetectable" viral load, it does not mean that HIV is no longer present, but rather, that the test is not sensitive enough to measure the amount (see also [Reservoir](#)). For viral load assays, "limit of quantification" is becoming the preferred term.

### **Liposome**

Microscopic globules of lipids manufactured to enclose medications. The liposome's fatty layer is supposed to protect and confine the enclosed drug until the liposome adheres to the outer membrane of target cells. By delivering treatments directly to the cells needing them, drug efficacy may be increased while overall toxicity is reduced.

### **Liver Enzyme**

See both [ALT](#) and [AST](#).

### **Liver Function Test (LFT)**

A test that measures the blood serum level of any of several enzymes produced by the liver. An elevated liver function test is a sign of possible liver damage.

### **Lobucavir (Cyclobut G)**

Bristol-Myers Squibb's experimental [nucleoside analog](#). It appears that lobucavir has activity against most viruses in the herpes family and hepatitis B and may be a potent inhibitor of HIV as well. Although a CMV trial is planned, no specific HIV trials are in the works.

### **Log (Logarithm)**

Formally, the number of times ten must be multiplied with itself to equal a certain number. For example, 100,000 is log 5 because it is equal to  $10 \times 10 \times 10 \times 10 \times 10$ . Logs are used to measure changes in [viral load](#). For example, a reduction in viral load from 100,000 to 1,000 copies/ml is a two log (or 99 percent) reduction. Note that a half log change is not a five-fold difference but a change of 3.16-fold (the square root of ten).

### **Long Terminal Repeat (LTR)**

The genetic material at each end of the HIV genome. When the HIV genes are integrated into a cell's own genome, the LTR interacts with cellular and viral factors to initiate the transcription of the HIV DNA into an RNA form that is packaged in new virus particles. Activation of the LTR is a major step in triggering HIV replication.

### **Long-Term Nonprogressor**

An individual who has been infected with HIV for at least seven to twelve years (different authors use different timespans) and yet retains a CD4 cell count within the normal range and no evidence of disease progression.

### **Long-Term Survivor**

A looser term than long-term nonprogressor that indicates any person with any stage of HIV infection, including AIDS, who is stable over a period of years.

## **Loviride**

See [NNRTI](#).

## **Lumbar Puncture (LP)**

Insertion of a needle into the lower spinal canal to obtain a sample of cerebrospinal fluid. Also called a spinal tap.

## **Lymph**

A transparent, slightly yellow fluid that carries lymphocytes to and from the lymph nodes and helps to collect foreign microbes. Lymph is derived from tissue fluids. The fluid passes through the lymphatic ducts and then enters the bloodstream.

## **Lymphadenopathy**

Swelling or enlargement of the lymph nodes due to infection or cancer. The swollen nodes may be palpable or visible from outside the body.

## **Lymphatic Vessels**

A body-wide network of channels, similar to the blood vessels, that transports lymph to the lymphoid tissue and into the bloodstream.

## **Lymph Node (Lymph Gland)**

Small bean-sized organs made up mostly of densely packed [lymphocytes](#), lymph fluid and connective tissue. Clusters of lymph nodes are widely distributed in the body and are essential to the functioning of the immune system. They are the main sites where acquired immune responses are launched (see [Immune System](#) and [Naive T-Cell](#)). Lymph nodes are connected with each other, other lymphoid tissue and the blood by the lymphatic vessels.

## **Lymphocyte**

White blood cells that mature and reside in the lymphoid organs and are responsible for the acquired immune response (see [Immune System](#)).

The two major types of lymphocytes are T-cells and B-cells.

## **Lymphoid Interstitial Pneumonitis (LIP)**

A type of pneumonia that affects 35 to 40 percent of children with AIDS and causes hardening of the lung membranes involved in absorbing oxygen. LIP is an AIDS-defining illness in children.

## **Lymphoid Tissue**

The organs of the lymph system throughout the body, including the bone marrow, thymus, lymph nodes, spleen, tonsils, Peyer's patches and the lymphocyte aggregates on mucosal surfaces.

## **Lymphokine**

A substance produced by lymphocytes to precipitate various immune reactions. Lymphokines include the interferons and interleukins and are a subset of the cytokine family.

## **Lymphoma**

A cancer of the lymphoid tissue, largely a solid tumor with cells arising from proliferating lymphocytes. Symptoms may include lymph-node swelling, weight loss and fever. Some examples of lymphomas are [Burkitt's lymphoma](#), [Hodgkin's disease](#) and [non-Hodgkin's lymphoma](#). Treatment involves radiation therapy (radiotherapy) or chemotherapy or both.

## **Lymphoproliferative Response**

A specific immune response that entails rapid T-cell replication. Standard antigens, such as tetanus toxoid, that elicit this response are used in lab tests of immune competence.

## **Lysis**

The splitting and dissolution of cellular or viral material by chemical action.

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# M: MAC through Myopathy



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## MAC (Mycobacterium Avium Complex)

A serious opportunistic infection caused by two similar bacteria (*Mycobacterium avium* and *Mycobacterium intercellulare*) found in the soil and dust particles. In AIDS, MAC can spread through the bloodstream to infect lymph nodes, bone marrow, liver, spleen, spinal fluid, lungs and intestinal tract. Typical symptoms of MAC include night sweats, weight loss, fever, fatigue, diarrhea and enlarged spleen. MAC is usually found in people with CD4 counts below 100. Clarithromycin, azithromycin, ethambutal, rifampin, clofazimine and rifabutin are some of the antibiotics commonly used in MAC prevention and treatment. (Treatment of active infection usually involves combination therapy.) MAC is also called MAI.

## Macrophage

A large scavenger cell that ingests degenerated cells and foreign organisms. Macrophages exist in large numbers throughout the body and contribute to the development of acquired immunity by acting as antigen presenting cells. They also ingest and destroy foreign matter coated with antibody. Macrophages can be infected by HIV.

## Macula

The pigmented central area or "yellow spot" of the retina that is adjacent to the optic nerve. It is the most sensitive area of the retina and contains the fovea, a depressed region that is responsible for detailed central vision.

## Magnetic Resonance Imaging (MRI)

A noninvasive, non-x-ray diagnostic technique based on the magnetic fields of hydrogen atoms in the body. MRI provides computer-generated images of the body's internal tissues and organs.

## MAI (Mycobacterium Intercellulare)

See MAC.

## Maintenance Therapy

Extended drug therapy, usually at a diminished dose, administered after a disease has been brought under control. Maintenance therapy is utilized when a complete cure is not attainable, and a disease is likely to recur if therapy is halted. See also Induction Therapy.

## Major Histocompatibility Complex (MHC)

Two classes of molecules on cell surfaces. MHC class I molecules exist on all cells and hold and present foreign antigens to CD8 cytotoxic T-lymphocytes if the cell is infected by a virus or other microbe. MHC class II molecules are found on the immune system's antigen presenting cells and display antigen to activate CD4 T-helper cells.

## Malabsorption

Inability of the gastrointestinal tract to absorb food, drugs or any substance needed to maintain good health; if not countered leads to weight loss and AIDS wasting syndrome.

**Malaise**

A vague feeling of discomfort or uneasiness, often the result of infection or a drug's side effects.

**Malignant**

Refers to cells or tumors growing in an uncontrolled fashion. Such growths may spread to and disrupt nearby normal tissue or reach distant sites via the bloodstream. By definition, cancers are always malignant, and the term malignancy implies cancer.

**Marinol (Dronabinol)**

An appetite stimulant composed of THC, the major psychoactive ingredient in marijuana.

**Masked**

The same as blinded (see [Controlled Trial](#)). Used when blinded would be an infelicitous term. In CMV retinitis trials, for example, "masked" investigators are kept ignorant of which participants are receiving which therapy while they examine participants' retinas (or photographs of their retinas) for signs of CMV progression.

**Mast Cell**

An immune system cell filled with granules of inflammatory chemicals such as histamine. This cell is believed to play a leading role in generating the symptoms of allergy.

**MDR-TB (Multi-Drug Resistant Tuberculosis)**

A strain of TB that does not respond to two or more standard anti-TB drugs. MDR-TB usually arises when treatment is intermittent, thus allowing a buildup of mutations in the TB bacteria that confer broader and broader drug resistance.

**Medulla**

The inner portion of an organ.

**Megadosing**

Medical treatment with very large doses of a naturally occurring, supposedly nontoxic substance, usually a vitamin.

**Megestrol Acetate (Megace)**

An appetite stimulant approved for the treatment of weight loss in people with AIDS. Megestrol acetate is a synthetic version of the female hormone progesterone. Most of the weight gain it leads to has been found to be fat rather than protein. Possible side effects include impotence and decreased libido occasionally in men and breakthrough uterine bleeding in women.

**Memory T-Cell**

A T-cell that bears receptors for a specific foreign antigen encountered during a prior infection or vaccination. After an infection or a vaccination, some of the T-cells that participated in the response remain as memory T-cells, which can rapidly mobilize and clone themselves should the same antigen be re-encountered during a subsequent infection.

**Meningitis**

Inflammation of the meninges, the membranes that envelope the brain and spinal cord. It may be caused by a bacterium, fungus or virus.

**Meta-Analysis**

A method of summarizing previous research by reviewing and combining

results from multiple clinical trials. Meta-analyses are attempted when previous studies were too small individually to achieve meaningful or statistically significant results. Because combining data from disparate groups is problematic, meta-analyses usually are considered more suggestive than definitive.

## **MHC**

See [Major Histocompatibility Complex](#).

## **Microbe**

A microscopic living organism, such as a bacteria, fungus, protozoa or virus.

## **Microbicide**

An agent that destroys microbes. Topical microbicides, applied to mucosal surfaces, act as chemical barriers to prevent the spread of sexually transmitted diseases. Several compounds are under investigation to block HIV infection.

## **Micronutrient**

A vitamin or mineral that the body must obtain from outside sources. Micronutrients are essential to the body in small amounts because they are either components of enzymes (the minerals) or act as coenzymes in managing chemical reactions. See also [Vitamin](#).

## **Microsporidiosis**

An intestinal infection that causes diarrhea and wasting in people with HIV. It results from two different species of microsporidia, a protozoal parasite. Among the possible treatments are [thalidomide](#) and [albendazole](#).

## **MIP-1a, MIP-1b (Macrophage Inflammatory Protein-1 alpha and beta)**

[Chemokines](#) that bind to the [CCR5](#) receptor site and interfere with HIV's fusion with uninfected cells.

## **Mitochondria**

A rod-shaped or oval body in cells that is the site of energy production by means of oxidation.

## **Mitogen**

A substance that induces cell division.

## **Mitosis**

The process of cell division.

**Molluscum Contagiosum** A skin condition caused by a pox virus infection, distinguished by small dome-shaped papules (bumps) on the face, upper trunk or extremities. Current treatment is mainly cosmetic. It often involves application of liquid nitrogen to the papules as a means of excising them.

## **Monoclonal Antibody**

An antibody produced by laboratory cultures of a single cell line. The antibodies are all identical, binding with the same antigen on a bacteria, virus or cancer cell, and are supposed to evoke an immune response.

## **Monocyte**

A large white blood cell that is the precursor of macrophages.

## **Mononeuritis Multiplex (MM)**

A rare type of neuropathy that causes patchy areas of movement and

asymmetrical sensory abnormalities. MM tends to occur during the asymptomatic, early period of HIV infection, but a more severe type, attributed to CMV infection, has been observed in people with advanced AIDS.

### **Monotherapy**

Medical treatment consisting of a single drug administered alone.

### **M-Tropic (Macrophage-Tropic)**

Refers to strains of HIV that have an affinity for infecting [macrophages](#) as well as CD4 T-lymphocytes (see [CD4 Cell](#)), except for lab-bred CD4 cell strains. When entering new cells M-tropic HIV usually binds to the [CCR5](#) receptor in addition to the CD4 receptor. This type of HIV is generally a non-syncytia-inducing (NSI) virus (see [Syncytium](#)).

### **Mucous Membrane**

The moist layer of tissue lining the digestive, respiratory, urinary and reproductive tracts -- all the body cavities with openings to the outside world except the ears.

### **Mutation**

Any alteration, loss, gain or exchange of genetic material within a cell or virus. Mutations are perpetuated in succeeding generations of that cell or virus (or of an entire multicellular organism if the mutated cell is a sperm, egg or spore). They can occur spontaneously or in response to environmental factors. See also [Resistance](#).

### **Myalgia**

Pain in one or more muscles.

### **Mycobacterium**

A group of bacteria with many disease-causing members. The causative agents for tuberculosis, leprosy and MAC all belong to this group.

### **Mycobacterium Avium Complex (Mycobacterium Intercellulare)**

See [MAC](#).

### **Mycoplasma**

A group of bacteria, some of whose members cause disease in animals and humans. Mycoplasma are very simple one-celled organisms without an outer membrane. They penetrate and infect individual cells. Most commonly, mycoplasma cause pneumonia.

### **Mycosis**

Any disease caused by a fungus.

### **Myelitis**

Inflammation of either the spinal cord or the bone marrow.

### **Myelopathy**

Any disease affecting the spinal cord.

### **Myelosuppression**

See [Bone Marrow Suppression](#).

### **Myelotoxic**

Destructive to bone marrow.

### **Myocardial**

Refers to the heart's muscle mass.

## **Myopathy**

Progressive muscle weakness. Myopathy may arise as a toxic reaction to AZT or as a consequence of HIV infection itself.

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# N: N-Acetylcysteine through Nystatin



Vol. 11, No. 6  
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## NAC (N-Acetylcysteine)

A naturally occurring substance that is metabolized into the amino acid cysteine. Cysteine is one of the three components of the major cellular antioxidant [glutathione](#), and people with HIV have decreased levels of this compound. Taking NAC will restore glutathione levels, but it remains to be proven whether this increase in glutathione has clinical benefit. See also [Oxidative Stress](#).

## Naive T-Cell

A T-cell arising from the immune system's production of fresh cells in the bone marrow. Naive T-cells respond to newly encountered pathogens containing antigens the immune system has not processed before. The naive T-cells' activation and proliferation create an acquired immune response to the newly encountered pathogenic agent. After the disease is eradicated, a portion of the T-cell population engendered by the activated naive T-cells constitute a reservoir of memory cells, which proliferate and respond very quickly to any recurrence of the disease. See also [Memory T-Cell](#) and [Immune System](#).

## Nandralone Decanoate (Deca Durabolin)

An injectable [anabolic steroid](#) being studied for the treatment of AIDS-related wasting syndrome.

## Natural History of Disease

The course of a disease when left untreated.

## Natural Killer Cell

See [NK Cell](#).

## NCI (National Cancer Institute)

A branch of the [NIH](#), that oversees considerable research in HIV and AIDS-related malignancies.

## Nef

An HIV regulatory protein whose functions are not well understood. HIV without nef appears to have low capacity to infect new cells. Nef also blocks HIV-infected cells from expressing [CD4](#) and [MHC class I molecules](#) (see both) on their surfaces, thus limiting the immune system's ability to recognize and kill these cells.

## Nelfinavir (Viracept)

Agouron Pharmaceuticals' protease inhibitor. FDA-approved for adults and children over two years old. Nelfinavir should be taken three times a day with a meal or light snack. Its most common side effect is diarrhea.

## Neoplasia

The abnormal growth of new tissue, consisting of a neoplasm or tumor.

## Neopterin

A substance present in bodily fluids that is elevated when the immune system is activated. Serum or cerebrospinal fluid neopterin levels are measured in some studies as a complementary surrogate marker for HIV

disease.

**Nephritis**

Inflammation of the kidneys.

**Nephrolithiasis**

The formation of sediment or small stones in the kidneys. See also [Kidney Stone](#).

**Nephrotoxicity**

Damage to the kidneys.

**Neurologic**

Relating to nervous system, including the brain.

**Neuron**

One of the electrically active cells that transmit signals within the brain or nervous system.

**Neuropathy**

Disease or degeneration of the nerves. See [Peripheral Neuropathy](#).

**Neuropsychologic Tests**

Tests designed to measure certain aspects of brain function, such as memory, concentration, attention and visual/motor skills.

**Neurotransmitter**

A substance secreted by excited nerve cells (neurons) that conveys the nerve signal to another nerve cell across the gap, or synapse, between the two cells.

**Neutralizing Antibody**

[Antibodies](#) that can directly block the infective capacity of a microorganism, particularly a virus's ability to penetrate cells.

**Neutropenia**

A shortage of neutrophils in the blood.

**Neutrophil**

A type of [granulocyte](#) that is especially protective against bacterial infections. Neutrophils are also termed polymorphonuclear cells (PMNs) because of their internal structure.

**Nerve Growth Factor (NGF)**

A naturally produced substance that has many roles in the maintenance of nerves and nerve cells, especially sensory ones. Synthetic, recombinant NGF is a proposed therapy for HIV- and drug-associated neuropathies.

**Nevirapine (Viramune)**

Boehringer Ingelheim's non-nucleoside reverse transcriptase inhibitor (see [NNRTI](#)), marketed by Roxanne Laboratories. Nevirapine is FDA-approved for treatment of HIV-infected adults in combination with [nucleoside analogs](#). Possible side effects include severe rash, fever and liver impairment.

**NIAID (National Institute of Allergy and Infectious Diseases)**

The federal agency that is responsible for a great deal of the government-sponsored AIDS research. NIAID is a branch of the [NIH](#).

**NIH (National Institutes of Health)**

The federal agency responsible for overseeing government-sponsored biomedical research. It is divided into 24 institutes and research centers.

**NIMH (National Institute of Mental Health)**

A branch of the [NIH](#) that oversees neurologic and psychologic research.

**NK (Natural Killer) Cell**

A type of [lymphocyte](#) that attacks and destroys foreign, virus-infected and cancerous cells. NK cells are not targeted at specific antigens the way [cytotoxic T-lymphocytes](#) are. They are part of the innate rather than the acquired immune response. See [Immune System](#).

**NNRTI (Non-Nucleoside Reverse Transcriptase Inhibitor)**

A member of a class of compounds, including delavirdine and nevirapine, that acts to directly combine with and block the action of HIV's [reverse transcriptase](#). In contrast, nucleoside analogs block reverse transcriptase by capping the unfinished DNA chain that the enzyme is constructing. NNRTIs have suffered from HIV's ability to rapidly mutate and become resistant to their effects.

**Noncompliant**

Refers to a patient who is unwilling or unable to follow a treatment regimen exactly as prescribed.

**Non-Hodgkin's Lymphoma (NHL)**

A lymphoma made up of B-cells and characterized by nodular or diffuse tumors that may appear in the stomach, liver, brain or bone marrow of people with HIV. After Kaposi's sarcoma, NHL is the most common opportunistic cancer in people with AIDS.

**NSI Virus**

Non-syncytium-inducing HIV. See [Syncytium](#).

**Nucleoside**

A combination of one of five single or double ringed "bases" and a sugar (ribose for RNA or deoxyribose for DNA). These molecular units are the building blocks of DNA and RNA, the genetic material found in living organisms. Before being added to a DNA or RNA sequence, nucleosides must have a phosphate group added (see [Phosphorylation](#)).

**Nucleoside Analog**

A type of antiviral drug, such as AZT, ddI, ddC or d4T, whose structure constitutes a defective version of a natural nucleoside. Nucleoside analogs may take the place of the natural nucleosides, blocking the completion of a viral DNA chain during infection of a new cell by HIV. The HIV enzyme [reverse transcriptase](#) is more likely to incorporate nucleoside analogs into the DNA it is constructing than is the DNA polymerase that cells use for DNA construction.

**Nucleotide**

A phosphorylated [nucleoside](#).

**Nucleotide Analogs**

[Adefovir](#), [cidofovir](#) and other antiviral compounds that function exactly like [nucleoside analogs](#) but are pre-activated through the addition of a phosphate group during their synthesis. This [phosphorylation](#) is supposed to enhance the drug levels and activity achieved within cells.

Nucleotide analogs typically are active against a wide range of virus, including herpes viruses, hepatitis B and sometimes HIV.

### **Nystatin**

An antifungal drug used primarily as a topical agent for oral candidiasis (thrush).

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# O: Ocular through Oxidative Stress

## Ocular

Relating to the eye.

## Off-Label

Use of a drug for a disease or condition other than the indication for which it was approved by the FDA. For example, many doctors prescribe paromomycin (humatin) for cryptosporidiosis, although it is not approved for treating this disease.

## OI (Opportunistic Infection)

See [Opportunistic Condition](#).

## 141W94 (VX-478)

An experimental protease inhibitor developed by Vertex and licensed by Glaxo-Wellcome. Preliminary studies indicated that 141W94 may cross the [blood brain barrier](#) and that it could be active against HIV resistant to some other protease inhibitors.

## Open-Label Trial

A study in which both researchers and participants know what drug a person is taking and at what dose.

## Opiate

A natural or synthetic derivative of opium that has similar analgesic and sedative effects.

## Opportunistic Condition

An infection or cancer that occurs especially or exclusively in persons with weak immune systems due to AIDS, cancer or immunosuppressive drugs such as corticosteroids or chemotherapy. KS, PCP, toxoplasmosis and cytomegalovirus are all examples of opportunistic conditions. Also more loosely termed Opportunistic Infection (OI).

## Oral Hairy Leukoplakia (OHL)

A whitish lesion that appears on the side of the tongue and inside cheeks. The lesion appears raised, with a ribbed or "hairy" surface. OHL occurs mainly in people with declining immunity and may be caused by Epstein-Barr virus infection.

## Organic Molecule

A molecule with a central structure made up of carbon atoms plus hydrogen and oxygen atoms and, in proteins, nitrogen. Organic molecules may also include isolated atoms of other elements.

## Orphan Drug

A status granted by the FDA to unpatentable medications developed for rare diseases. Orphan drug status gives the drug's manufacturer a seven-year right to exclusively market the compound. This protection of unpatentable orphan drugs encourages their development by greatly increasing their profitability.

## Oxandralone (Oxandrin)

An oral anabolic steroid approved by the FDA in 1962 as a general remedy for weight loss in a variety of conditions including chronic

infection. Now being studied as treatment for AIDS-related wasting syndrome.

## **Oxidation**

A chemical reaction resulting from exposure to oxygen or other electron-seizing atoms or molecular combination of atoms (see [free radicals](#)). On the cellular level, oxidative reactions are the source of energy, but free radicals and other oxidizing agents can damage cellular components, such as membranes, and interfere with cells' regulatory systems.

## **Oxidative Stress**

A highly oxidized environment within cells that is thought to promote HIV replication because cells are forced into a highly activated state due to loss of control of their regulatory systems.

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# P: Package Insert through Pyrogenic



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## Package Insert

A form containing the indications, side effects and other relevant information known about a drug, found inside any box of prescription drugs on pharmacy shelves.

## Paclitaxel (Taxol)

A chemotherapeutic drug extracted from the yew tree and used for the treatment of solid tumors. Taxol is an experimental treatment for Kaposi's sarcoma. It works by inhibiting cell division and has a long list of side effects, in particular bone marrow suppression (resulting in neutropenia).

## Palliative

Offering relief of symptoms or comfort without ameliorating the underlying disease process.

## Pancreatic Enzymes

Proteins made by the pancreas that aid in digestion.

## Pancreatitis

Inflammation of the pancreas. Pancreatitis, an occasional side effect of [ddl](#), can result in severe abdominal pain and death. Its onset can be predicted by rises in blood levels of the pancreatic enzyme amylase as well as increases in blood [triglycerides](#).

## Papillomavirus

The large group of papova viruses that includes the cause of genital warts or condylomata. See also [HPV](#).

## Pap Smear

A microscopic examination of the surface cells of the cervix, usually conducted on scrapings from the cervical opening. This assay is used to detect tissue changes that could be forerunners of cervical cancer.

## Papule

A small elevation or bump on the skin.

## Parallel Track

A rarely used national procedure for distributing experimental HIV and AIDS drugs to people who are otherwise unable to participate in ongoing clinical trials. The program usually needs initial approval by [NIAID](#) and requires supervision by a national [Data and Safety Monitoring Board](#). It functions under a national protocol that tells individual physicians how to administer the drug and what information to collect on their patients' experience. It is similar to [treatment IND](#), but can be instituted at an earlier phase in the drug's development, as soon as safety is demonstrated.

## Parenteral

Outside the digestive tract. This term refers to intravenous, subcutaneous and other nonoral modes of administering medications and therapies. See also [Enteral](#).

**Paresthesia**

Abnormal sensations such as burning or tingling. Paresthesia may constitute the first symptoms of peripheral neuropathy, or it may be a limited drug side effect that does not worsen with time.

**Paromomycin (Humatin)**

An antibiotic in pill form used for suppression of infection by intestinal parasites, including AIDS-related [cryptosporidiosis](#). Possible side effects include stomach upset and diarrhea.

**Passive Immunotherapy (PIT)**

A process in which individuals with advanced disease (who have low levels of HIV antibody production) are infused with plasma rich in HIV antibodies or an immunoglobulin concentrate (HIVIG) made from such plasma. The plasma is obtained from asymptomatic HIV-positive individuals with high levels of HIV antibodies.

**Pathogen**

Any disease-provoking microorganism or material.

**Pathogenesis**

The manner in which a particular infectious microbe causes disease.

**PBMC (Peripheral Blood Mononuclear Cell)**

Circulating white blood cells with one nucleus, mainly [lymphocytes](#) and [monocytes](#) (see both).

**PCP (Pneumocystis Carinii Pneumonia)**

A lung infection caused by an infection with *Pneumocystis carinii* (which is either a protozoa or fungus -- it has characteristics of both). *P. carinii* grows rapidly in the lungs of people with AIDS and was formerly the leading AIDS-related cause of death. *P. carinii* infection sometimes may occur elsewhere in the body (skin, eye, spleen, liver or heart).

**PCR (Polymerase Chain Reaction) Test**

A very sensitive test that measures the presence or amount of RNA or DNA of a specific organism or virus (for example, HIV or CMV) in the blood or tissue. PCR tests such as Hoffmann-La Roche's Amplicor quantitative PCR assay are being used to gauge HIV disease progression and the effect of particular treatments on HIV infection.

**Peak Level**

The highest concentration of a drug in blood plasma, occurring soon after it is administered. Sometimes abbreviated as C<sub>max</sub>. Peak levels that are too high cause excess side effects without necessarily enhancing the antimicrobial effects of the drug. See also [Trough Level](#).

**Pelvic Inflammatory Disease (PID)**

A gynecological condition caused by an infection (usually sexually transmitted) that spreads from the vagina to the upper parts of a woman's reproductive tract in the pelvic cavity. PID takes different courses in different women, but can cause abscesses and constant pain almost anywhere in the genital tract. If left untreated, it can cause infertility or more frequent periods. Severe cases may invade the liver and kidneys, causing dangerous internal bleeding, lung failure and death.

**Pentamidine (Pentam, NebuPent)**

An antibiotic used in aerosol form as a prevention against PCP ("aerosolized pentamidine") and used intravenously to treat PCP.

Possible side effects of inhaled pentamidine include coughing, wheezing, shortness of breath and fatigue. Among the side effects of injected pentamidine are low blood sugar, pancreatitis and kidney disease.

### **Pentoxifylline (Trental)**

A drug that reduces levels of tumor necrosis factor (TNF). Pentoxifylline is FDA-approved for treatment of leg cramps and poor circulation. Possible side effects include nausea and other digestive upset, dizziness and headache. Clinical trial results in HIV have not been promising.

### **Peptide**

A short sequence of amino acids.

### **Peptide T**

An eight amino acid peptide whose structure resembles the portion of gp120 that binds to the CD4 receptor. Originally proposed as an inhibitor of HIV that would block binding to the CD4 receptor, it later was tested as treatment for AIDS-related cognitive impairment and peripheral neuropathy. The subject of much underground use in the community, peptide T has failed so far to exhibit substantive benefit in trials.

### **Perinatal**

Around the time of birth -- shortly before to shortly afterward.

### **Perinatal Transmission**

Transmission of a pathogen, such as HIV, from mother to baby during or just before birth. See also Vertical Transmission.

### **Peripherally Inserted Central Catheter**

See PICC line.

### **Peripheral Neuropathy**

Nerve damage characterized by sensory loss, pain, muscle weakness and wasting of muscle in the hands or legs and feet. It may start with burning or tingling sensations or numbness in the toes and fingers. In severe cases, paralysis may result. Peripheral neuropathy may arise from an HIV-related condition or be the side effect of certain drugs, in particular some of the nucleoside analogs.

### **Peyer's Patch**

One of the large number of intestinal lymph nodules, which exist either alone or in aggregates.

### **PGL (Persistent Generalized Lymphadenopathy)**

A condition common in people with HIV in which multiple lymph nodes are swollen for a long period of time.

### **Phagocytosis**

The process by which white blood cells such as macrophages engulf and destroy foreign material, dead tissues and cells.

### **Pharmacokinetics**

The extent that the body is able to absorb, distribute and eliminate a drug over time.

### **Phase I**

The earliest stage clinical trial for studying an experimental drug in humans. Phase I trials are generally comparatively small. They provide an initial evaluation of a drug's safety and pharmacokinetics -- how the drug is absorbed, what tissues it reaches and how long it takes to leave

the body. Such studies also usually test various doses of the drug (dose-ranging) to obtain an indication of the appropriate dose to use in later studies.

#### **Phase IV**

A trial designed to evaluate the long-term safety and efficacy of a drug for a given indication, usually carried out as a post-marketing study after a drug has been approved by the FDA.

#### **Phase III**

An advanced stage clinical trial designed to conclusively show how well a drug works as compared to other treatments. Phase III trials are large and frequently involve multiple sites. They need to rely on definitive measures of effectiveness rather than surrogate markers. Optimally a phase III trial would show whether a new drug extends survival or otherwise improves the health of patients on treatment (clinical improvement), but the FDA is considering accepting long-term reductions in viral load as proof of efficacy for anti-HIV medications. These studies generally last longer and are larger than phase II trials.

#### **Phase II**

A more advanced stage clinical trial that follows the phase I trials. A phase II trial gathers preliminary information on whether an experimental drug works. Data often are based on laboratory assays that provide quick, but indirect measurements of a drug's effect on disease (see [Surrogate Marker](#)). Phase II trials often involve a hundred people or more who are randomly assigned to take either the experimental drug or a "control" (the standard treatment for the disease or placebo). Usually the trial is double-blinded, which means that no one knows who is getting the experimental drug until the trial is completed and the results are analyzed.

#### **Phenotype**

An organism's functional capabilities and outward appearance. It is the physical expression of the [genotype](#).

#### **Phenotypic Assay**

A test that measures some aspect of an organism's functions. For example, the amount of a certain drug needed to inhibit the growth of an HIV [isolate](#) in a test-tube culture. If HIV has developed resistance to a certain drug, higher than the normally administered amounts of that drug will be necessary to inhibit viral activity. Resistance is categorized as high-level, intermediate or low-level. See also [Genotypic Assay](#).

#### **Phosphorylation**

The addition of a phosphate group (phosphorus plus four oxygen atoms) to an organic molecule.

#### **Photosensitivity**

Heightened skin response to sunlight or ultraviolet light (rapid burning when exposed to the sun).

#### **PICC Line (Peripherally Inserted Central Catheter)**

A [catheter](#) inserted into an arm vein and used for periods of up to three months. This catheter does not need to be surgically implanted and can be inserted at home by a trained nurse.

#### **Pilot Trial**

A feasibility study intended to gain preliminary information about efficacy,

safety or a particular research hypothesis. Pilot trials are used to work out the details of further clinical trials.

### **Pivotal Trial**

A trial designed to be decisive in a company's decision to develop an experimental drug. A "go/no go" trial.

### **Placebo**

A comparison substance against which experimental drugs are sometimes compared. A placebo traditionally is an inactive substance resembling the experimental treatment. In placebo-controlled trials, the control group takes placebo, while the test group takes the experimental drug. Either group may receive a standard therapy in addition. Many placebo-controlled trials are also double-blinded, which means that neither doctors nor patients know who is receiving drug or placebo.

### **Placenta**

A temporary organ in the uterus that allows a fetus to receive nutrients, oxygen and other substances (such as medications) from the mother and to eliminate carbon dioxide and other wastes.

### **Plasma**

The watery, yellowish fluid that carries white and red blood cells and platelets through the circulatory system. Plasma is prepared for laboratory assays by treating whole blood with an anticoagulant and then centrifuging the fluid to separate out the cells.

### **Platelet**

A small, specialized cell fragment that triggers the clotting of blood so that damaged vessels stop bleeding. Normally 150,000 to 300,000 platelets are found in one milliliter of blood, but platelet counts can become sharply depleted during HIV infection. (See [Immune Thrombocytopenic Purpura](#).) Another function of platelets is to collect antigen-antibody complexes in the blood. Platelets coated with such complexes are eliminated in the spleen. The source of platelets is megakaryocyte cells in the bone marrow.

### **PML (Progressive Multifocal Leukoencephalopathy)**

A rapidly debilitating opportunistic infection caused by the "JC" virus, a polyoma virus that infects brain tissue and causes damage to the central nervous system. Symptoms vary from patient to patient but include loss of muscle control, paralysis, blindness, problems with speech and an altered mental state. PML can lead to coma and death. There are no standard treatments for this disease.

### **PMN (Polymorphonuclear Cell)**

See [Neutrophil](#).

### **Pneumocystis Carinii Pneumonia**

See [PCP](#).

### **Polymerase Chain Reaction**

See [PCR](#).

### **Polyneuropathy**

A disease process involving a number of peripheral nerves.

### **Post-Exposure Prophylaxis**

Administering drug treatment to prevent disease in an individual after

exposure to an infectious organism. For example, guidelines have been established for post-exposure prophylaxis of health care providers who have been exposed to HIV through needle sticks.

### **Postpartum**

After childbirth.

### **PPD (Purified Protein Derivative) Test**

A simple skin test used to detect prior exposure to tuberculosis. PPD is injected under the skin of the forearm. After 48 to 72 hours, the injection site will exhibit a red, hard bump if a person has been infected with TB.

### **Preclinical**

Refers to the testing of experimental drugs in the test tube or in animals -- the testing that occurs before trials in humans may be carried out.

### **Prepartum**

Before childbirth, during pregnancy.

### **Prevalence**

The total number of people in a specific population who are living with a particular condition or disease at a given time. See also [Incidence](#).

### **Primary HIV Infection**

The flu-like syndrome that occurs immediately after a person contracts HIV. This initial infection precedes seroconversion and is characterized by fever, sore throat, headache, skin rash and swollen glands. Also called acute infection.

### **Principal Investigator**

The head researcher responsible for organizing and overseeing a clinical trial.

### **PRN**

A term used on prescriptions to mean "take as needed," from the Latin phrase pro re nata.

### **Probenecid**

A drug that enhances the kidney's excretory functions. Patients receiving [cidofovir](#) for CMV must take probenecid and intravenous hydration with saline solution in order to protect the kidneys from damage caused by cidofovir buildup within kidney cells.

### **Procrit**

See [Epogen](#).

### **Prodrug**

A compound that is converted within the body into the active form that has medical effects. Prodrugs are useful when the active drug may be too toxic to administer systemically, the active drug is absorbed poorly by the digestive tract, or the body breaks down the active drug before it reaches its target.

### **Prognosis**

The probable future course of disease in a patient.

### **Proinflammatory Cytokines**

Soluble chemical messengers produced by white blood cells that trigger an inflammatory immune response and may as a side effect stimulate HIV, which only infects and replicates in activated cells. See both [Tumor](#)

Necrosis Factor and IL-2.

## **Prophylaxis**

Treatment to prevent the onset of a particular disease (primary prophylaxis) or recurrence of symptoms in an existing infection that has been brought under control (secondary prophylaxis or maintenance therapy).

## **Prospective Study**

Refers to studies designed to follow the progress of a cohort forward in time, rather than analyzing data from previous research. See Retrospective Study.

## **Protease**

An enzyme that triggers the breakdown of proteins. HIV's protease enzyme breaks apart long strands of viral protein into the separate proteins constituting the viral core and the enzymes it contains. HIV protease acts as new virus particles are budding off a cell membrane.

## **Protease Inhibitor**

A drug that binds to and blocks HIV protease from working, thus preventing the production of new functional viral particles.

## **Protein**

Large molecules made up of long sequences of amino acids. Some hormones and all enzymes and cellular structural components are proteins. Three-fourths of the dry weight of most cells consists of proteins.

## **Protocol**

A plan that describes the details of a clinical trial, its rationale, goal, the drugs involved, their dosage levels, treatment duration and who and how many may participate.

## **Protozoa**

A large group of one-celled (unicellular) animals, including amoebas. Some protozoa cause parasitic opportunistic infections in people with AIDS, notably toxoplasmosis and cryptosporidiosis.

## **Provirus**

The status of HIV when it exists as proviral DNA inserted into the genome of the host cell.

## **Pruritic**

Itchy.

## **Psychostimulants**

A class of drugs used to stimulate the central nervous system, Ritalin, for example. Psychostimulants are used in the treatment of depression. These medications are very addictive and may activate an addiction to stimulants (amphetamines) in a patient in recovery. Side effects include insomnia and loss of appetite.

## **Psychotropic Drugs**

Drugs that affect an individual's behavior or mental functions.

## **p24**

The main HIV core protein. It can be measured in blood and other bodily fluids. Measurement of p24 levels in the blood have been used to monitor viral activity, although this is not considered a very accurate method.

Human antibody to p24 can bind with this antigen and make it undetectable. New "acid-dissociated" versions of the p24 test attempt to separate the antibody from the p24, with uneven success. More advanced versions are in development. At present, p24 tests sometimes are employed to detect HIV during primary infection, before antibody production begins.

### **Pulmonary**

Referring to the lungs.

### **Pyrimethamine (Daraprim)**

An oral antiprotozoa drug used in combination with sulfadiazine or clindamycin to treat toxoplasmosis. Its many possible side effects include severe allergic reactions and rashes, anemia, leukopenia, thrombocytopenia, insomnia and diarrhea.

### **Pyrogenic**

Fever-causing.

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# Q-R: Qualitative Assay through Rupture of Membranes

## **Qualitative Assay**

A test that determines the presence or absence of a substance.

## **Quantitative Assay**

A test that measures the amount of a substance in a specified sample size.

## **Quinolone**

A class of synthetic antibiotic drugs with broad spectrum antibacterial activity; examples include ciprofloxacin, ofloxacin and sparfloxacin.

## **Randomized Trial**

A trial in which the participants are randomly assigned a treatment which could be the study medication, a standard treatment or placebo. Randomization minimizes the differences among groups by equally distributing people with particular characteristics among all the trial arms.

## **RANTES (Regulated-Upon-Activation, Normal T-Expressed and Secreted)**

A chemokine that binds to the CCR5 receptor site and interferes with HIV's fusion with uninfected cells.

## **Receptor**

Specific proteins usually located on the surface of a cell that bind with antigens, antibodies and chemical messengers. HIV binds with the CD4 portion of the T-cell receptor plus one of the chemokine receptors, usually either CCR5 or CXCR-4, in order to enter a cell.

## **Recombinant**

Refers to compounds produced by laboratory or industrial cultures of genetically engineered living cells. A new gene has been added to the cells' gene set to enable the cells to produce large quantities of the desired compound. Recombinant compounds often are versions of naturally occurring substances that exist in low amounts in their original source. An example of a recombinant agent used in AIDS is recombinant growth hormone (rHGH, or Serostim) for AIDS wasting syndrome.

## **Rectum**

The terminal section of the large intestine, including the anus.

## **Refractory**

Refers to disease that is resistant to treatment.

## **Regimen**

A prescribed drug treatment plan, specifying which drugs are to be used, in what doses and on what schedule.

## **Registration Trial**

A trial designed to provide solid support for a drug's approval by the FDA.

## **Remission**

A period when the signs and symptoms of a disease have been eliminated through treatment or the immune response. A disease may be

in remission without a complete cure having been effected.

## **Remune**

A therapeutic vaccine consisting of killed HIV stripped of its envelope protein and mixed with a mineral oil-based adjuvant known as Incomplete Freund's Adjuvant. The product is under development by the Immune Response Corporation and was originally proposed a decade ago by Jonas Salk.

## **Renal**

Refers to the kidneys.

## **Repertoire**

The full range of T- and B-lymphocytes that make up a competent immune system. Each clone of such cells targets a particular antigen. In AIDS, it is thought that when the CD4 T-cells are depleted to a certain point, entire clones have been lost, reducing the CD4 cell repertoire and making people vulnerable to opportunistic infections. Increasing CD4 counts through treatment may not bring back the full range of cells, but just multiply those that are left. Various immune-based therapies are being studied in an attempt to restore the full repertoire.

## **Reservoir**

Denotes a class of cells in the body that may harbor HIV long after highly active combination therapy commences. Examples of such reservoirs include latently or chronically infected macrophages and lymphocytes. These are unaffected by current antiviral agents, which do not attack the HIV provirus within infected cells' nuclei. Other possible reservoirs are really sanctuaries, tissues such as the brain and testes, where drugs do not penetrate easily.

## **Resistance**

Reduction in a pathogen's sensitivity to a particular drug. Resistance is thought to result mainly from a genetic mutation. In HIV, such mutations can change the structure of viral enzymes and proteins so that an antiviral drug cannot bind with them as well as it used to. Resistance detected by searching a pathogen's genetic makeup for mutations thought to confer lower susceptibility is called genotypic resistance. Resistance found by successfully growing laboratory cultures of the pathogen in the presence of a drug is called phenotypic resistance. High-level resistance reduces a drug's virus-suppressing activity hundreds of times. Low-level resistance represents only a few-fold reduction in drug effectiveness. Depending on the toxicity of the drug, low-level resistance may be overcome by using higher doses of the drug in question.

## **Reticuloendothelial System**

The collection of macrophages and other white blood cells that ingest infectious organisms such as bacteria and viruses.

## **Retina**

The multilayered, light-sensitive membrane lining the inner eyeball that sends visual images to the brain via the optic nerve.

## **Retinal Detachment**

A condition in which a portion of the retina becomes separated from the inner wall of the eye. Retinal detachment can result from retinal disease such as CMV retinitis or ganciclovir implants (see Intraocular Implant). The condition can rapidly lead to vision loss, but is treatable by various

surgical methods and by adding silicone to the eye's vitreous humor to increase the pressure on the retina.

### **Retinitis**

Inflammation of the retina, usually caused by infections such as CMV. If left untreated, it can lead to blindness.

### **Retrospective Study**

A study that tries to answer a new medical question by reviewing data gathered in the past. A retrospective study cannot be rigorously designed and risks attributing effects to the wrong causes. See Prospective Study.

### **Retrovirus**

A type of virus that, when not infecting a cell, stores its genetic information on a single-stranded RNA molecule instead of the more usual double-stranded DNA. HIV is an example of a retrovirus. After a retrovirus penetrates a cell, it constructs a DNA version of its genes using a special enzyme, reverse transcriptase. This DNA then becomes part of the cell's genetic material.

### **Rev**

A regulatory protein produced by HIV within infected cells. Rev helps transport HIV RNA sequences (messenger RNA) out from the nucleus into the cell's cytoplasm, where it directs construction of proteins for new virus particles.

### **Reverse Transcriptase (RT)**

A uniquely viral enzyme that constructs DNA from an RNA template, which is an essential step in the life-cycle of a retrovirus such as HIV. The RNA-based genes of HIV and other retroviruses must be converted to DNA if they are to integrate into the cellular genome.

### **Ribavirin**

A nucleoside analog approved as a treatment for respiratory syncytial virus. Ribavirin also has shown activity against hepatitis C, but its use in HIV infection is highly controversial. It is possible that it enhances the activity of ddI.

### **Ribozyme**

A recombinant RNA/enzyme combination designed to fit onto and cleave specific viral or cancerous genetic sequences from a cell's DNA. The gene for an anti-HIV ribozyme may be inserted into a cell to protect it from the virus's activity.

### **Rifabutin (Mycobutin)**

An oral drug approved by the FDA for preventing MAC in people with advanced HIV infection. Rifabutin is also used in combination with other drugs for the treatment of active MAC and TB infections. Possible side effects include neutropenia, eye and muscle irritation and a brown-orange discoloration of skin and urine.

### **Rifampin**

An antibiotic used in combination therapy for treatment of mycobacterial infections such as TB and MAC.

### **Ritonavir (Norvir, ABT-538)**

Abbott Laboratories' first commercial protease inhibitor. It is FDA-approved for adults and children over two years old, alone and in combination with nucleoside analogs. Ritonavir needs to be kept

refrigerated and should be taken twice a day with meals. There are at least 25 drugs that should not be taken with ritonavir and many more that will require changes in dosing. Side effects include nausea and diarrhea.

### **RNA (ribonucleic acid)**

A single-stranded molecule composed of nucleotide sequences. It is similar in basic structure to half of the double-stranded DNA. In cells, RNA transmits the code from the DNA-based genes that instructs the cells' chemical machinery to produce structural proteins and enzymes. The RNA segments in the cells represent copies of portions of the DNA sequences in the nucleus. In retroviruses, RNA is the sole repository of the viral genes.

### **Rupture of Membranes**

Refers to the breaking of the amniotic sac (or "bag of waters") surrounding the fetus in a pregnant woman. It has been reported that there is a higher risk of vertical transmission among HIV-positive pregnant women if the membranes rupture over four hours before delivery of the baby.

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# S: Salvage Therapy through Systemic

## Salvage Therapy

A final therapy for people who are nonresponsive to or cannot tolerate other available treatments for a particular condition.

## Sanctuary

A tissue or organ like the brain and testes into which drugs penetrate at a low rate. Because of the reduced drug levels in such tissues, they may harbor replicating HIV long after the commencement of potent antiviral treatment.

## Saquinavir (Invirase)

Hoffmann-La Roche's protease inhibitor. It is FDA-approved for HIV infection in combination with [nucleoside analogs](#). Saquinavir's anti-HIV activity is low in the body because the compound suffers from poor absorption in the intestines and rapid breakdown by the liver. Combining saquinavir with ritonavir raises its blood levels by ten-fold and creates a respectable antiviral therapy. A new formulation of saquinavir, packaged in a soft gel capsule, increases intestinal absorption four times. The recommended dose of this new version is twice the recommended dose of the old version, leading to an eight-fold increase in blood levels.

## Sarcoma

A malignant tumor of the skin and soft tissue.

## Scavenger Cells

Any one of a diverse group of white blood cells with the capacity to engulf and destroy foreign material, dead tissues and cells. See also [Phagocytosis](#).

## SDF-1 (Stromal Cell-Derived Factor)

A [chemokine](#) that binds to the [CXCR-4](#) receptor site and interferes with HIV's fusion with uninfected cells.

## Sensitivity

The degree to which an organism is affected by a drug. See [Resistance](#).

## Sepsis

The presence of disease-causing organisms or their toxins in the blood or tissues and the associated inflammatory response to the infection.

## Septicemia

A serious condition caused by large numbers of bacteria in the blood. This condition can be fatal. Symptoms are a sudden drop in blood pressure and changes in heart rate and temperature.

## Septra

See [TMP/SMX](#).

## Seroconversion

Development of detectable antibodies to HIV in the blood as a result of infection. It normally takes several weeks to several months for antibodies to the virus to develop after HIV transmission. When

antibodies to HIV appear in the blood, a person will test positive in the standard [ELISA](#) test for HIV.

### **Seroprevalence**

The rate of positive serostatus (see next) within a population at a given time point.

### **Serostatus**

The condition of having or not having detectable antibodies to a microbe in the blood as a result of infection. One may have either a positive or negative serostatus.

### **Serotonin**

A naturally occurring substance found in the brain and intestines that is released when blood vessel walls are damaged. It acts as a blood vessel constrictor and inhibits gastric secretions. Serotonin is also a [neurotransmitter](#) whose presence seems to decrease depression. See [SSRI](#).

### **Serum**

The yellowish, cell-free liquid portion of the blood formed when a sample of whole blood is allowed to clot. See also [Plasma](#).

### **Set Point**

The rate of HIV replication at steady state, after primary infection. It is usually established by six months after seroconversion and is evaluated using the viral load assay.

### **SGOT**

See [AST](#).

### **SGPT**

See [ALT](#).

### **Shingles (Herpes Zoster)**

A skin condition caused by reactivation of a Varicella zoster virus (VZV) infection, usually acquired in childhood (when it appears as chicken pox). Shingles consists of painful blisters on the skin that follow the path of individual nerves. The blisters generally dry and scab, leaving minor scarring. Standard treatment is with famciclovir or acyclovir. See also [Herpes Virus](#).

### **Side Effect**

Any reaction that results from a drug or therapy. The term usually refers to a negative event, such as nausea, blood disorders or neuropathy. Experimental drugs must be evaluated for both short- and long-term side effects. Also called adverse effect or adverse reaction.

### **Simian Immunodeficiency Virus (SIV)**

A retrovirus found in monkeys that is closely related to HIV.

### **Sinusitis**

Inflammation of the nasal sinuses.

### **SI Virus**

Syncytia-inducing HIV. See [Syncytium](#).

### **Spinal Tap**

See [Lumbar Puncture](#).

## **Spleen**

A large lymphatic organ in the upper left of the abdominal cavity with several functions: 1) trapping of foreign matter in the blood; 2) destruction of degraded red blood cells; 3) formation of new lymphocytes and antibody production; and 4) storage of excess red blood cells.

## **Sputum Analysis**

A method of detecting certain infections (especially tuberculosis) using a sample of sputum, the mucus matter that collects in the respiratory and upper digestive passages and is expelled by coughing. A sputum smear is cultured in the laboratory to increase the population of any bacteria it contains.

## **SSRI (Selective Serotonin Reuptake Inhibitor)**

A class of antidepressant drugs that regulates levels of [serotonin](#). Among these drugs are Prozac and Zoloft. SSRIs are not usually sedating and may alleviate chronic constipation. Possible side effects include nausea and sexual dysfunction.

## **Statistical Significance**

An analytical evaluation of the results of a comparative trial or survey. Data yielding a difference in outcome depending on treatment or environmental factor are considered statistically significant if various mathematical procedures indicate that there is less than a one in twenty (5%) chance that the same results would occur through chance. (In statistical terms this is expressed as  $p < .05$  -- or, the p-value is less than .05.)

## **STD**

Sexually transmitted disease.

## **Stem Cell**

One of the precursor cells that are the source of all blood cells. Stem cells inhabit the bone marrow, where they begin their differentiation and maturation process. This process is affected by the cytokines and hormones that they encounter. There are some stem cells that circulate in the blood.

## **Steroid**

A member of a large family of structurally similar lipid molecules. Steroid molecules have a basic skeleton consisting of four interconnected carbon rings. Different classes of steroids have different functions. All the sex hormones are steroids. Cortisol and cortisone regulate many aspects of metabolism and, when administered medically, reduce swelling, pain and other manifestations of inflammation.

## **Stevens-Johnson Syndrome**

A serious, sometimes fatal inflammatory disease characterized by fever, severe rash and blisters on the skin and open sores on the [mucous membranes](#). The syndrome may be triggered by a severe allergic reaction to certain drugs (e.g. Bactrim and nevirapine).

## **Stomatitis**

Inflammation of the mucous membranes in the mouth.

## **Strain**

A variant characterized by specific genetic features.

## **Subcutaneous**

Below the skin, also refers to injecting medicines directly under the skin. In the latter case, abbreviated SC.

### **Substrate**

The compounds acted upon by an [enzyme](#).

### **Subtype**

A major subpopulation of a given organism, with a distinct genetic makeup. See [Clade](#).

### **Sulfadiazine**

A sulfa drug used in combination with pyrimethamine for treating toxoplasmosis. Possible side effects include bone marrow suppression.

### **Sulfa Drug**

A group of antibiotic drugs containing a particular sulfur-nitrogen (sulfonamide) unit, such as [sulfadiazine](#). The drugs work by interfering with the metabolism of folic acid, a B vitamin. Many HIV-infected persons experience allergic reactions to sulfa drugs. In some cases this reaction can be overcome with a [desensitization](#) protocol.

### **Superoxide Dismutase (SOD)**

One of the major cellular antioxidant enzymes. It removes surplus peroxide, an oxidizing [free radical](#). Superoxide dismutase comes in two forms, one containing zinc and the other containing manganese.

### **Surrogate Marker**

A laboratory measurement or physical sign that does not directly show how patients feel, but rather predicts the likely effect of a medication on their future disease status. CD4 cell count is an example of a surrogate marker in HIV infection.

### **Symptomatology**

The collected symptoms of a particular disease.

### **Syncytium (pl.: Syncytia)**

A giant cell formed by the fusion of an HIV-infected cell with one or more adjacent non-infected cells, observed in laboratory cell cultures. This clumping of cells leads to direct cell-to-cell infection. Strains of HIV are classified as SI (syncytia-inducing) or NSI (non-syncytia-inducing). SI strains infect T-lymphocytes, both naturally occurring and laboratory bred lines, and bind to the [CXCR-4](#) receptor site. They are associated with rapid disease progression. NSI HIV infects macrophages and also CD4 lymphocytes, except laboratory cell lines. They bind to the [CCR5](#) receptor site along with the CD4 receptor.

### **Synergy (adj.: Synergistic)**

The interaction of two or more treatments such that their combined effect is greater than the sum of the individual effects observed when each treatment is administered alone.

### **Systemic**

Concerning or affecting the body as a whole. A systemic therapy is one that the entire body is exposed to, rather than just the target tissues affected by a disease.

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# T: Tat and Tumor Necrosis Factor



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## Tat

An HIV protein that helps produce new complete HIV RNA genomes, and ultimately new virus, from the HIV proviral DNA template present in infected cells. Tat may also be involved in: 1) the reactivation of other latent viruses in people with AIDS, such as JC virus, the cause of PML; 2) the development of AIDS-related KS by stimulating the formation of new blood vessels; and 3) the triggering of anergy and apoptosis in CD4 cells.

## Taxol

See Paclitaxel.

## T-cell (T-Lymphocyte)

Any lymphocyte that matures in the thymus. These include CD4 and CD8 cells.

## Telomeres

Protective repetitive genetic fragments at the end of chromosomes.

## Teratogenicity

The ability to cause defects in a developing fetus. This is distinct from mutagenicity, which results in genetic mutations in sperms, eggs or other cells. Teratogenicity is a potential side effect of many drugs, such as thalidomide.

## Testosterone

The naturally occurring male hormone. When administered as a drug it can cause gain in lean body mass, increased sex drive and possibly aggressive behavior. Many men with HIV have low testosterone levels.

## T4 Cell

See CD4 Cell.

## Thalidomide

A drug that reduces levels of TNF and inhibits angiogenesis. It is being studied as a treatment for AIDS-related wasting, aphthous ulcers, diarrhea and Kaposi's sarcoma. Potential side effects include sedation, constipation, peripheral neuropathy and severe birth defects in the infants born to women taking the drug during pregnancy. Safer thalidomide analogs are under development that have less anti-angiogenesis activity but still greater TNF inhibitory potential.

## T-Helper Cell

See CD4 Cell.

## Therapeutic Index

The ratio between the toxic concentration of a drug and an effective one. To be a useful therapy, the therapeutic index has to be high. For example, cyanide will kill all the HIV in a patient, but only at levels high enough to kill the patient, too -- its therapeutic index is too low.

## Therapeutic Vaccine

An injected therapy consisting of synthetic or prepared HIV antigen (e.g. gp160 or killed vaccine with its envelope stripped off). The vaccine is administered to people who already have HIV, usually along with an adjuvant to increase the effect. The goal is to heighten and broaden the immune response to HIV, helping to halt disease progression. To date no therapeutic vaccine has demonstrated effectiveness.

### **Th1 Response**

An acquired immune response whose most prominent feature is high cytotoxic T-lymphocyte activity relative to the amount of antibody production. The Th1 response is promoted by CD4+ "Th1" T-helper cells. See also [Th3 Response](#).

### **3TC (Lamivudine, Epivir)**

A nucleoside analog with anti-HIV and anti-hepatitis B activity. Comparatively potent and nontoxic for a nucleoside analog, but 3TC-resistant HIV emerges rapidly during monotherapy, so 3TC can be used only in combination with other highly active antiviral agents.

### **Thrombocyte**

See [Platelet](#).

### **Thrombocytopenia**

Low number of platelets in the blood. See [Immune Thrombocytopenic Purpura](#).

### **Thrush**

See [Candidiasis](#).

### **Th3 Response**

An acquired immune response whose most prominent feature is high antibody production relative to the amount of cytotoxic T-lymphocyte activity. The Th3 response is promoted by CD4+ "Th3" T-helper cells. See also [Th1 Response](#).

### **Thymic Hormones**

Hormones produced by the thymus that are believed to play a role in the maturation of T-lymphocytes and overall modulation of the immune system. Versions of several of them have been under study as anti-HIV therapies -- thymopentin and thymosin-a1 in particular.

### **Thymus**

a lymphoid organ in the chest that is the site of lymphocyte formation and maturation as well as the secretion of thymic hormones. An important function of the thymus is to weed out lymphocytes that react to proteins produced by the body ("self-antigens"), thus preventing autoimmune disease. The thymus is a large organ during childhood, but shrinks during adolescence.

### **TID**

A term used on prescriptions to mean, "take three times a day," from the Latin phrase *ter in die*. Time to Event (Time and Event Schedule): a method of compiling and evaluating data from clinical trials that allows for participants to enroll at different times.

### **Titer**

The concentration or activity of a given dissolved substance, such as a drug, antibody or antigen, as measured by the solution's chemical reactivity in a "titration assay." In particular, the extent to which an

antibody-plasma extract can be diluted before losing its ability to protect against the corresponding antigen.

### **TMP/SMX (trimethoprim/sulfamethoxazole, Bactrim, Septra)**

A combination antibiotic drug effective at preventing and treating PCP. It also serves as a prophylaxis against toxoplasmosis. Possible side effects include skin rash (which on rare occasions spreads to other body surfaces and becomes life-threatening [Stevens-Johnson syndrome](#), see), digestive disturbances, bone marrow suppression and liver impairment.

### **TNF (Tumor Necrosis Factor Alpha, TNF $\alpha$ )**

A [cytokine](#) produced by macrophages that helps activate T-cells. It also may stimulate HIV activity. TNF levels can be elevated in people with HIV, and the molecule is suspected to play a part in HIV-related wasting, neuropathy and dementia.

### **Topical**

Applied directly to the skin.

### **Topoisomerase**

An enzyme that uncoils the tightly wound DNA in cells' nuclei so that cell division and replication can take place. See [Topotecan](#).

### **Topotecan (Hycamtin)**

An anticancer chemotherapy made by SmithKline Beecham and FDA-approved for refractory metastatic ovarian cancer. It inhibits topoisomerase I and blocks cell division. Topotecan is a possible therapy for HIV, having been found to inhibit the HIV [long terminal repeat's](#) role in HIV replication in lab tests. Similarly, lab data show it to be active against [PML](#). Its main drawback is severe bone marrow suppression, leading to life-threatening neutropenia. Safer analogs are under development, however.

### **Total Parenteral Nutrition**

See [TPN](#).

### **Toxicity**

The harmful side effects of a given drug.

### **Toxoplasmosis**

A life-threatening opportunistic infection caused by the protozoa *Toxoplasma gondii*. Toxoplasmosis can affect a number of organs, but it most commonly causes encephalitis (brain inflammation) with characteristic focal lesions. It is contracted by eating contaminated undercooked meat. There is a very small risk of contracting toxoplasmosis from contact with toxo-containing cat feces. Symptoms include headache, confusion, fever and dementia. Standard treatment is a combination of pyrimethamine and sulfadiazine. TMP/SMX (Bactrim or Septra) is the standard preventive in toxoplasma-positive patients with CD4 counts below 100.

### **TPN (Total Parenteral Nutrition)**

A liquid food substitute infused directly into a vein and designed to meet a person's entire nutritional needs. TPN provides an alternate nutritional route in cases of severe gastrointestinal distress and poor nutrient absorption. It strengthens the body and relieves the digestive tract while therapy for the underlying condition progresses. TPN's high cost hinders its use as long-term therapy.

## **Trachea**

The windpipe, the passage in the throat leading to the lungs.

## **Treatment-Experienced**

Refers to patients with a history of previous treatment for a particular condition. Compare Treatment-Naive.

## **Treatment IND (TIND)**

An FDA-approved program that allows a drug developer to give physicians an experimental medication for administration to seriously ill patients who have no other treatment options. In exchange, the doctor provides data on the safety and effectiveness of the drug. It is similar to [parallel track](#), but is not limited to HIV and AIDS drugs and may be instituted only at a later stage in a drug's development. A drug has to have shown an indication of efficacy besides demonstrable safety. TIND also does not involve oversight by NIAID.

## **Treatment-Naive**

Refers to patients with no history of previous treatment for a particular condition. Compare Treatment-Experienced.

## **Tricyclic Antidepressant (TCA)**

A class of drugs such as Elavil used to treat depression. TCAs may be sedating and have been used for treating insomnia. TCAs also are used for the treatment of [peripheral neuropathy](#). Side effects include drowsiness, constipation and muscle pain. See also [SSRIs](#).

## **Triglyceride**

The combination of glycerol with three separate chains of fatty acids. This is the basic structure of most fats and oils.

## **Trimetrexate (Neutrexin)**

An intravenous antibiotic approved as an alternative treatment for moderate-to-severe PCP in cases of TMP/SMX failure or intolerance. Trimetrexate has serious bone marrow, liver, kidney and gastrointestinal toxicities due to its interference with folic acid metabolism. It must be administered along with leucovorin (folinic acid, which becomes folic acid in the body) to ameliorate the bone marrow suppression and other side effects.

## **Tropism**

An attraction to something; more specifically, the tendency of a virus to preferentially infect a particular host tissue or cell. Viral tropism is determined in part by the interaction of structures on the viral envelope (see [Envelope](#), [gp41](#), [gp160](#), [gp120](#)) with host cell receptor sites (see [Receptor](#), [CD4](#), [CCR5](#), [CXCR4](#)).

## **Trough Level**

The minimum concentration of a drug in blood plasma, occurring before the next time that drug is administered. Sometimes abbreviated as C<sub>min</sub>. Achieving an adequate trough level that retains sufficient antimicrobial activity is important in avoiding the rise of drug resistant microbes. See also [Peak Level](#).

## **T-Tropic (T-Lymphocyte-Tropic)**

Refers to strains of HIV that have an affinity for infecting CD4 [T-lymphocytes](#), usually through the [CXCR-4](#) receptor site. T-tropic HIV is generally of the SI variety (see [Syncytium](#)).

## **Tuberculosis (TB)**

A disease caused by the bacterium *Mycobacterium tuberculosis*. TB primarily infects the lungs, but it may attack almost any tissue or organ of the body. TB generally has a long latency period, and only about 10% of infected people with normal immunity ever experience active TB. For people with immune deficiencies, active TB is much more common. TB is transmitted in close quarters when a person with active TB coughs the microbe into the air.

## **Tumor Necrosis Factor**

See [TNF](#).

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# U-V: Undetectable through VX-478

## Undetectable

See [Limit of Detection](#).

## Uveitis

Inflammation of the uvea, the vascular middle coat of the eye within the outer white part (the sclera).

## Vaccine

A substance that contains recombinant antigen or weakened or killed infectious organisms. A vaccine provides long-term immunity against a pathogen by producing an acquired immune response giving rise to [memory cells](#) without causing disease. See [Immunization](#).

## Valaciclovir (Valtrex)

The prodrug of [acyclovir](#). Valaciclovir is an antiviral drug approved for the treatment of [shingles](#) and recurrent genital [herpes](#). It also has been tried unsuccessfully as a preventive of AIDS-related [CMV](#).

## Varicella Zoster Virus (VZV)

A herpes virus that causes chicken pox in children. Its reactivation in adults causes [shingles](#).

## Vector

A carrier or mode of transport for a parasite or disease-causing agent. Also a virus genetically engineered to carry a desired DNA sequence into cells' nuclei -- used for gene therapy and vaccines.

## Vertical Transmission

Transmission of a pathogen such as HIV from mother to fetus or baby during pregnancy or birth. See also [Perinatal Transmission](#).

## Viral Load

The amount of HIV RNA per unit of blood plasma. An indicator of virus concentration and reproduction rate, HIV viral load is increasingly employed as a predictor of disease progression. It is measured by [PCR](#) and [bDNA](#) tests and is expressed in number of copies of or equivalents to the HIV RNA genome per milliliter of plasma. (Note that there are two RNA copies per HIV virion.)

## Viremia

The presence of virus in blood or blood plasma. Plasma viremia is a quantitative measurement of HIV levels similar to viral load but is accomplished by seeing how much of a patient's plasma is required to spark an HIV infection in a laboratory cell culture.

## Virion

A complete virus particle existing outside a cell.

## Virology

The study of viruses and viral diseases.

## Virulence

The power of a microorganism to cause grave disease.

## **Virus**

A noncellular pathogen composed essentially of genetic material (DNA or RNA) surrounded by a protein envelope. Viruses can reproduce only within living cells into which they inject their genetic material. The viral genes then subvert an infected cell's normal chemical processes to create new virus particles, usually killing the cell in the process.

## **Vitamin**

Organic molecules essential in small amounts for normal metabolism, growth and development of the body. See also [Micronutrient](#).

## **Vitrasert**

See [Intraocular Implant](#).

## **Vitreous Humor**

The gel-like substance that fills the eyeball between the lens and the retina.

## **V3 (Third Variable) Loop**

Refers to a portion of the HIV envelope protein, [gp120](#), that plays a central role in enabling HIV virions to bind to uninfected cells. The amino acid sequence of the V3 loop can mutate considerably.

## **VX-478**

See [141W94](#).

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# W, X, Y & Z: Wasting Syndrome through Zovirax



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## Wasting Syndrome

An [AIDS-defining condition](#) characterized by unintentional loss of at least 10% of normal weight. The weight loss is largely the result of depletion of the protein in lean body mass and represents a metabolic derangement frequent during AIDS.

## Western Blot

A test for detecting the specific antibodies to HIV in a person's blood. It commonly is used to verify positive [ELISA tests](#). A Western Blot test is more reliable than the ELISA, but it is harder and more costly to perform. All positive HIV antibody tests should be confirmed with a Western Blot test.

## White Blood Cell

See [Leukocyte](#).

## Wild Type Virus

Naturally occurring HIV with an optimal genetic makeup and no lab-induced mutational defects. This term also refers to HIV that has not been exposed to antiviral drugs and therefore has not accumulated mutations conferring drug resistance.

## WinRho

See [Immune Thrombocytopenic Purpura \(ITP\)](#).

## Yeast Infection

See [Candidiasis](#).

## Zidovudine

See [AZT](#).

## Zinc

An essential mineral often depleted in persons with HIV. Zinc is a component of many enzymes. It is important in protecting cells against excess [oxidation](#) and helps immune cells mature and function. Ingesting high doses of zinc can be harmful, however, because it interferes with the absorption of copper, another essential micronutrient.

## Zinc Fingers

Zinc-containing amino acid structures on the surface of one of HIV's core proteins. The zinc fingers capture and help package HIV genetic material into newly budding [virions](#). They also appear to play a role during the early stage of cell infection, by aiding [reverse transcriptase](#). Several zinc finger inhibitors are under development at present.

## Zovirax

See [Acyclovir](#).

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Generic Name	Brand Name	Common Abbreviation	Description	HIV/AIDS-Related Application	Distributor
acyclovir	Zovirax	ACV	Nucleoside Analog	Herpes	Glaxo Wellcome
albendazole	Albenza		Antibiotic	Microsporidiosis	SmithKline Beecham
amphotericin B	Fungizone IV Fungizone oral	AmB	Antifungal	Fungal Infections	Apothecon Bristol-Myers Squibb
atovaquone	Mepron		Antiprotozoal	PCP	Glaxo Wellcome
azithromycin	Zithromax		Antibiotic	MAC/Bacterial Infections	Pfizer
cidofovir	Vistide	HPMPC	Nucleotide Analog	CMV	Gilead Sciences
ciprofloxacin	Cipro		Antibiotic	MAC/Bacterial Infections	Miles
clarithromycin	Biaxin		Antibiotic	MAC	Abbott
clindamycin	Cleocin		Antibiotic	PCP/ Toxoplasmosis	Pharmacia & Upjohn
clotrimazole	Lotrimin Mycelex	CLO	Antifungal	Candida	Schering-Plough Bayer
dapsone	Dapsone USP		Antibiotic	PCP	Jacobus
daunorubicin, liposomal	Dauno-Xome		Liposome-encapsulated Cancer Chemotherapy	KS	NeXstar
delavirdine	Rescriptor	DLV	Non-nucleoside Reverse Transcriptase Inhibitor (NNRTI)	HIV	Pharmacia & Upjohn
didanosine, dideoxyinosine	Videx	ddl	Nucleoside Analog	HIV	Bristol-Myers Squibb
doxorubicin, liposomal	DOX-SL		Liposome-encapsulated Cancer Chemotherapy	KS	Sequus
dronabinol	Marinol	THC	Appetite Stimulant	Wasting	Roxane
erythropoietin	Epogen Procrit	EPO	Growth Factor	Anemia	Amgen Ortho Biotech
ethambutol	Myambutol		Antibiotic	MAC/TB	Lederle
famciclovir	Famvir	Nucleoside Analog	Prodrug	Herpes	SmithKline Beecham

fluconazole	Diflucan	FLU	Antifungal	Candida/ Cryptococcal Meningitis	Pfizer
flucytosine	Ancobon	5-FC	Antifungal	Candida/ Cryptococcal Meningitis	Hoffmann-La Roche
foscarnet	Foscavir		Nucleoside Analog	CMV/ Acyclovir-resistant Herpes	Astra
ganciclovir	Cytovene	DHPG	Nucleoside Analog	CMV	Hoffmann-La Roche
ganciclovir implant	Vitrasert		Intraocular implant	CMV	Chiron Vision
granulocyte colony stimulating factor (filgrastim)	Neupogen	G-CSF	Growth Factor	Neutropenia	Amgen
granulocyte- macrophage colony stimulating factor (sargramostim)	Leukine Prokine	GM-CSF	Growth Factor	Neutropenia	Immunex Schering-Plough
hydroxyurea	Hydrea		Host factor inhibitor	HIV	SmithKline Beecham
immune globulin	Gamimune N Gammagard Gammar Polygam S/D Venoglobulin WinRho SD	IVIG	Passive Immunotherapy	ITP, Bacterial Infections in Children	Bayer Baxter Centeon American Red Cross Alpha Therapeutic NABI
indinavir	Crixivan	IDV	Protease Inhibitor	HIV	Merck
interferon alpha-2	Intron A Roferon-A	IFNa	Immune modulator	KS	Schering-Plough Hoffmann-La Roche
interleukin-2	Proleukin	IL-2	Immune modulator	HIV	Chiron
isoniazid	Nydrazid	INH	Antibiotic	TB	Apothecon
itraconazole	Sporanox	ITR	Antifungal	Fungal Infections	Janssen
ketoconazole	Nizoral		Antifungal	Candida/ Histoplasmosis	Janssen
lamivudine	Epivir	3TC	Nucleoside Analog	HIV	Glaxo Wellcome
megestrol acetate	Megace		Hormonal Appetite Stimulant	Wasting	Bristol-Myers Squibb
metronidazole	Flagyl		Antibiotic	Ambiasis	Searle
nandrolone decanoate	Deca Durabolin		Anabolic Steroid	Wasting	Organon Teknica
nelfinavir	Viracept	NFV	Protease Inhibitor	HIV	Agouron
nevirapine	Viramune	NVP	Non-nucleoside Reverse Transcriptase Inhibitor (NNRTI)	HIV	Boehringer Ingelheim
nitazoxanide		NTZ	Antiprotozoal	Cryptosporidiosis	Unimed
nystatin	Mycostatin		Antifungal	Candida	Bristol-Myers Squibb
octreotide acetate	Sandostatin		Digestive Hormone Analog	Managing Diarrhea	Sandoz

oxandralone	Oxandrin		Anabolic Steroid	Wasting	Bio-Technology General
paclitaxel	Taxol		Anticancer	KS	Bristol-Myers Squibb
paromomycin	Humatin		Antibiotic	Amoebiasis/ Cryptosporidiosis	Parke-Davis
pentamidine	Pentam		Antiprotozoal	PCP	Fujisawa
pentamidine, aerosolized	NebuPent		Antiprotozoal	PCP	Fujisawa
pyrimethamine	Daraprim		Antiprotozoal	Toxoplasmosis	Glaxo Wellcome
recombinant human growth hormone	Serostim	rHGH	Hormone	Wasting	Serono
rifabutin	Mycobutin		Antibiotic	MAC	Adria Laboratories
rifampin	Rifadin Rimactane		Antibiotic	TB/MAC	Marion Merrell Dow Novartis
ritonavir	Norvir	RTV	Protease Inhibitor	HIV	Abbott
saquinavir	Invirase	SQV	Protease Inhibitor	HIV	Hoffmann-La Roche
stavudine	Zerit	d4T	Nucleoside Analog	HIV	Bristol-Myers Squibb
sulfadiazine	Sulfadiazine Tablets USP		Antiprotozoal	Toxoplasmosis	Eon
thalidomide	Synovir		Anti-inflammatory/ TNF Inhibitor	Aphthous Ulcers/Wasting	Celgene
trimethoprim/ sulfamethoxazole	Bactrim Septra	TMP/SMX	Antibiotic	PCP/ Toxoplasmosis	Hoffmann-La Roche Glaxo Wellcome
trimetrexate	NeuTrexin		Antibiotic	PCP	US Bioscience
valaciclovir	Valtrex		Acyclovir Prodrug	Herpes	Glaxo Wellcome
zalcitabine	Hivid	ddC	Nucleoside Analog	HIV	Hoffman-La Roche
zidovudine	Retrovir	AZT, ZDV	Nucleoside Analog	HIV	Glaxo Wellcome

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