

# Glossary of Medical Terms

*(Updated May 1, 2016)*

Definitions for terms related to hepatitis and its treatment, and general medicine, health, and sexuality.

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## A

**ADVERSE EVENT:** an unwanted side effect of a medication.

**ABDOMEN:** (adjective ABDOMINAL): the area of the body between the chest and pelvis.

**ABSORPTION:** the passage of nutrients, drugs, or water from the intestines into the bloodstream.

**ABSTRACT:** a written summary of the important points of a medical article.

**ACCELERATE:** speed up.

**ACCELERATED APPROVAL:** FDA regulations governing early marketing approval of promising drugs for life-threatening illnesses.

**ACETAMINOPHEN:** (also known as paracetamol): an analgesic drug used to relieve pain and reduce fever. Tylenol is the most well-known brand name.

**ACQUIRED IMMUNE DEFICIENCY SYNDROME:** (AIDS): a syndrome characterized by suppression of the immune system, rendering the body susceptible to various illnesses; the late, symptomatic stage of HIV disease.

**ACTIGALL:** see ursodiol.

**ACTIVE INFECTION:** an infection in which a disease-causing microorganism is actively replicating and infecting new cells.

**ACUPRESSURE:** a traditional Chinese healing technique in which finger pressure is applied to specific points on the body to treat disease and alleviate symptoms.

**ACUPUNCTURE:** a traditional Chinese healing technique that involves inserting thin needles into different acupuncture points on the body. Acupuncture is believed to improve the flow of qi, the body's vital energy; it is used for many conditions, including pain and addiction.

**ACUTE:** rapid-onset, short-term initial stage of a disease. Contrast with chronic.

**ACUTE HBV:** Initial infection with hepatitis B.

**ACUTE HEPATITIS:** the initial stage of viral hepatitis following infection. In HCV, acute hepatitis refers to the first six months of infection.

**ADA:** see Americans with Disabilities Act.

**ADEFOVIR:** (ADV) brand name HEPSERA): A nucleoside analogue that is used to treat chronic hepatitis B. Adefovir is not recommended as a first line of HBV treatment because of the high rate of drug resistance.

**ADDITIVE EFFECT:** the combined effect of several drugs that is the sum of the effects that would be produced by each of the drugs in the absence of the others.

**ADHERENCE:** following a prescribed treatment regimen, including correct dosage, timing, and number of doses per day.

**ADJUNCT THERAPY:** therapy given in addition to a primary treatment.

**ADRENAL GLAND:** one of a pair of glands located above the kidneys. The adrenal medulla produces hormones such as adrenaline (epinephrine), while the adrenal cortex produces corticosteroids and androgens.

**ADVERSE REACTION (SIDE EFFECT):** an undesired action or effect of a drug or other treatment.

**AEROBIC EXERCISE:** a type of exercise (e.g., running, swimming) that makes the heart and lungs work harder to supply the muscles with oxygen.

**AFP:** see alpha-fetoprotein.

**AIDS:** see acquired immune deficiency syndrome.

**ALANINE AMINOTRANSFERASE:** (ALT; formerly SGPT): an enzyme (also called alanine transaminase) produced in the liver when the membranes of liver cells break down. ALT levels are measured to help assess the degree of liver damage and determine how well HCV treatment is working. A normal level is below 48 IU/L.

**ALBUMIN:** a blood protein produced by the liver that plays a role in maintaining normal blood volume. A low albumin level is associated with liver cirrhosis. A normal level is 3.2 to 5.0g.

**ALCOHOLISM:** a disorder characterized by excessive consumption of and dependence on alcohol.

**ALKALINE PHOSPHATASE:** (AP): an enzyme found in various body tissues and fluids. Abnormal alkaline phosphatase levels are associated with liver disease and bone and muscle damage. A normal level is 35 to 125 IU/L.

**ALKALOID:** an organic compound found in plants.

**ALLERGY:** an abnormal immune response to an antigen (allergen) that does not normally cause an adverse reaction (e.g., animal dander, pollen). Allergic reactions are caused by the release of histamine by mast cells, a type of white blood cell. Allergic symptoms may include runny nose (rhinitis), skin rash, asthma, and anaphylactic shock.

**ALLOGRAFT:** a transplant of genetically matched cells, tissues, or organs between two members of the same species.

**ALLOPATHY:** (adjective ALLOPATHIC): Western medicine; the conventional medical practices used most often in the U.S.

**ALOPECIA:** hair loss.

**ALPHA INTERFERON:** see interferon-alpha.

**ALPHA-FETOPROTEIN (AFP):** a protein, measurable in the blood, that is often elevated in people with liver cancer.

**ALPHA LIPOIC ACID (THIOCTIC ACID):** a compound that enhances the antioxidant effect of vitamin C and vitamin E, and may help reduce liver inflammation and protect liver cells from damage.

**ALT:** see alanine aminotransferase.

**ALTERNATIVE THERAPY:** any type of treatment that is not considered standard or conventional practice in a given culture. In Western countries, traditional Chinese medicine, homeopathy, naturopathy, and chiropractic are considered alternative therapies.

**AMENORRHEA:** absence of menstrual periods.

**AMERICANS WITH DISABILITY ACT (ADA):** a federal law that requires employers to offer certain protections and benefits (including "reasonable accommodation") to persons with disabilities that substantially limits major life activities.

**AMINO ACID:** an organic compound that is a basic structural unit of peptides and proteins. There are over 100 amino acids, eight of which are essential for human metabolism.

**AMINOTRANSFERASE (TRANSAMINASE):** an enzyme (e.g., ALT, AST) produced by the liver that catalyzes the transfer of amino acids. Abnormally high aminotransferase levels in the blood suggest liver damage.

**AMMONIA:** a toxic metabolic byproduct that is normally excreted in the urine.

**AMNESIA:** memory loss.

**AMPLICOR/COBALT AMPLICOR:** brand name of a PCR-based viral load test for HCV and HIV.

**ANA:** see antinuclear antibody

**ANALGESIC:** a drug or therapy that reduces pain.

**ANALINGUS: (RIMMING):** oral/anal sex.

**ANECDOTAL:** evidence based on reports of specific individual cases rather than controlled clinical studies.

**ANEMIA (ADJECTIVE ANEMIC):** reduced number of red blood cells or reduced ability of blood to carry oxygen. There are several types of anemia, all with different causes. Symptoms may include fatigue, weakness, pale skin, and difficulty breathing.

**ANESTHESIA (ADJECTIVE ANESTHETIC):** an agent that controls pain. Localized anesthesia blocks pain in a given area; general anesthesia produces unconsciousness.

**ANEURYSM:** an abnormally stretched, dilated section of a blood vessel that is prone to bursting.

**ANGINA PECTORIS:** chest pain that occurs when the heart muscle receives inadequate oxygen.

**ANOREXIA:** loss of appetite for food.

**ANTIBIOTIC:** an agent that kills or inhibits the growth of bacteria.

**ANTIBODY (IMMUNOGLOBULIN):** a protein produced by plasma cells (a type of immune system white blood cell) when they encounter foreign invaders. Specific antibodies bind to specific invaders, or antigens, and target them for destruction. The presence of antibodies indicates current infection with or past exposure to a pathogen.

**ANTIBODY POSITIVE (SEROPOSITIVE):** the presence in the blood of antibodies against a specific pathogen such as HCV.

**ANTIBODY TEST:** an assay that detects the presence of antibodies in a blood sample; ELISA and RIBA tests are used to detect HCV antibodies.

**ANTICOAGULANT:** a drug that reduces or delays blood coagulation or clotting.

**ANTICONVULSANT:** a drug that prevents or reduces convulsions or seizures.

**ANTIDEPRESSANT:** a drug that elevates the mood and alleviates mental depression. There are several types, including selective serotonin reuptake inhibitors (SSRI's), MAO inhibitors, and tricyclics.

**ANTIEMETIC:** a drug that relieves nausea and vomiting.

**ANTIFIBROTIC:** a drug or other agent than prevents or reduces the development of liver fibrosis or cirrhosis.

**ANTIGEN:** any agent or substance that stimulates an immune response. Antigens are often foreign invaders such as bacteria or viruses.

**ANTIHISTAMINE:** a drug that blocks the action of histamine, a chemical messenger in the body. Antihistamines are used to prevent or alleviate allergic reactions and to reduce stomach acid production.

**ANTINUCLEAR ANTIBODY:** An antibody that attacks cell nuclei.

**ANTIOXIDANT:** a substance that reduces oxidation by binding with and neutralizing free radicals. The body produces natural antioxidants, and they are also available in foods and dietary supplements (e.g., vitamin E, selenium).

**ANTIRETROVIRAL:** a drug that suppresses the activity or replication of retroviruses. Different types of antiretroviral drugs (e.g., reverse transcriptase inhibitors, protease inhibitors) interfere with various stages of the virus life cycle.

**ANTISENSE COMPOUNDS:** Compounds that target gene sequences associated with diseases to interfere with the disease process.

**ANTISENSE OLIGONUCLEOTIDE:** an agent that blocks the synthesis of disease-causing proteins by binding with and preventing translation of RNA (genetic material). HCV antisense oligodeoxynucleotides are directed against a specific HCV genetic sequence and inhibit viral gene expression.

**ANTIVIRAL:** a drug that suppresses the activity or replication of viruses.

**ANXIOLYTIC:** a drug that helps relieve mental anxiety.

**APLASTIC ANEMIA:** anemia due to a reduced level of red blood cells caused by the inability of stem cells in the bone marrow to produce new cells. Certain drugs suppress the bone marrow and can lead to aplastic anemia as a side effect.

**ARM:** a group of participants in a clinical trial who receive the same treatment (or placebo).

**ARTERIOGRAPHY (ANGIOGRAPHY):** examination of arteries (after injection of a dye) to look for damage and blockages.

**ARTHRALGIA:** joint pain.

**ARTHRITIS:** joint inflammation.

**ASCITES:** accumulation of fluid in the abdominal (peritoneal) cavity. Ascites may be a symptom of advanced liver disease with decompensated cirrhosis.

**ASPARTATE AMINOTRANSFERASE (AST, FORMERLY SGOT):** an enzyme (also called aspartate transaminase) produced in the liver. When liver cells are damaged, AST is released. Elevated levels may indicate liver disease, but are also seen in people with muscle damage.

**ASSAY:** a test, especially one used to detect the presence or amount of an agent in the blood or body tissues.

**AST:** see aspartate aminotransferase.

**AS-TREATED ANALYSIS:** a method of analyzing the results of a clinical trial that includes only participants who successfully complete a course of the treatment, excluding those who drop out early. Contrast with intent-to-treat analysis.

**ASYMPTOMATIC:** not feeling or showing outward symptoms or signs of a disease.

**ATHEROSCLEROSIS:** a condition in which blood vessels harden and lose their elasticity due to the build-up of fatty material (plaques).

**AUTOANTIBODY:** an antibody that targets the body's own tissues.

**AUTOIMMUNE RESPONSE (AUTOIMMUNITY):** a condition in which a person's immune system produces antibodies that attack the body's own tissues. Several conditions associated with hepatitis C (e.g., lichen planus, Sjögren's syndrome) appear to have an autoimmune aspect.

**AUTOIMMUNE THYROIDITIS:** an inflammatory, autoimmune condition in which the immune system attacks the thyroid gland.

**AYURVEDA:** a system of traditional medicine practiced in India.

## B

**BACTERIUM (PLURAL BACTERIA):** a simple single-celled microorganism. Bacteria are classified by their shape (e.g., rod, spirochete), staining properties (Gram positive or Gram negative) and habitat (aerobic, anaerobic).

**BASELINE:** an initial or known value (e.g., ALT level, HCV viral load) against which later measurements can be compared.

**B-CELL (B-LYMPHOCYTE):** a type of immune system white blood cell. B-cells mature into plasma cells that produce antibodies.

**BDNA:** see branched-chain DNA assay.

**BECK DEPRESSION INDEX:** a written, self-report questionnaire used to gauge clinical depression.

**BEHCET'S DISEASE:** a disease that presents as ulcerations in the eyes, mouth and genitals but can affect any organ of the body.

**BENIGN:** a mild, non-lethal illness, especially a non-cancerous tumor. Contrast with malignant.

**BIAS:** in a clinical trial, a false association that results from the failure to account for some skewing or influencing factor.

**BID:** taken twice daily.

**BILE:** a yellowish-green fluid produced by the liver that aids in the digestion of fats and the excretion of toxins.

**BILE DUCT:** the passage that carries bile from the liver to the small intestine.

**BILIRUBIN:** a yellowish pigment released when red blood cells are broken down. Normally bilirubin is processed and excreted by the liver. An excess level of bilirubin in the blood (hyperbilirubinemia) may indicate liver damage, and can lead to jaundice (yellowing of the skin and whites of the eyes), pale-colored stools, and dark urine. A normal bilirubin level is below 1.3mg.

**BINDING PROTEIN:** a protein synthesized by the liver that binds to and transports substances such as vitamins, minerals, hormones, and fats.

**BIOAVAILABILITY:** the degree to which a drug or other substance is absorbed and circulated in the body.

**BIOCHEMICAL RESPONSE (BIOLOGICAL RESPONSE):** a favorable response to treatment as indicated by normalization of blood values (e.g., liver enzyme levels).

**BIOFEEDBACK:** a technique in which people learn to use signals from their own bodies to influence physiological functions.

**BIOFLAVINOID (VITAMIN P):** natural pigments found in fruits and vegetables that increase absorption of vitamin C.

**BIOLOGICAL RESPONSE:** see biochemical response.

**BIOPSY (BX):** a procedure in which a sample of cells or tissue is taken for laboratory examination. Liver biopsies are used to monitor liver disease progression in people with HCV.

**BLINDING:** a method of conducting clinical trials in which participants do not know who is taking an experimental treatment, a standard (control) treatment, or a placebo. In a blinded study, the volunteers do not know what treatment (if any) they are receiving. In a double-blind study, neither the volunteers nor the researchers administering the treatment know who is receiving what. Blinding is done to reduce bias in drug trials. In the case of medical necessity, a study may be unblinded to reveal who is receiving what treatment.

**BLOOD-BORNE:** a pathogen that is transmitted through direct blood-to-blood contact, for example, through sharing dirty needles or through a blood transfusion.

**BLOOD TRANSFUSION:** the infusion of blood or blood components into an individual for the treatment of a medical condition. Transfusions may be homologous (from a donor) or autologous (previously stored blood from the recipient).

**BMI:** see body mass index.

**BOCEPREVIR (VICTRELIS):** HCV protease inhibitor taken in combination with pegylated interferon plus ribavirin. Previously used to treat hepatitis C.

**BODY MASS INDEX (BMI):** a measurement of body fat determined by dividing a person's weight (in kilograms) by height (in meters squared).

**BODYWORK:** healing techniques (e.g., massage therapy, reflexology) that involve manipulating or applying pressure to the body.

**BONEMARROW:** the soft, spongy material inside certain long bones where blood cells are produced.

**BRAIN FOG:** mild mental confusion, memory loss, and/or lack of concentration and alertness. May be a symptom of toxic chemical build-up due to impaired liver function. See hepatic encephalopathy.



**BRANCHED-CHAIN DNA ASSAY (BDNA):** a test that measures the amount of virus (viral load) in plasma or tissues using a chemical signal emitted by viral genetic material.

**BREAKTHROUGH:** the return of detectable viral load or high ALT levels in a person who had previously achieved a good virological or biochemical treatment response.

**BREAKTHROUGH THERAPY DESIGNATION:** assigned to drug by the Food and Drug Administration (FDA) if it can treat a serious disease or life threatening condition. The designation can accelerate FDA approval.

**BUDDING:** the emergence of newly produced virus particles through a host cell membrane.

**BUN:** (Blood urea nitrogen): a test that measures the amount of a certain waste product (nitrogen) excreted by the kidneys.

**BUPLEURUM:** an herb traditionally used in Chinese medicine to treat liver conditions.

**BX:** see Biopsy.

## C

**CADAVER:** the body of a dead person.

**CADAVERIC DONOR:** a recently deceased person who has donated an organ or tissue.

**CANCER:** a malignant neoplasm or tumor characterized by abnormal cell proliferation. Types include carcinoma (which affects epithelial cells), sarcoma (which affects soft tissues), lymphoma and leukemia (which affect lymphoid tissue), and glioma (which affects brain tissue).

**CANITIES:** a condition that causes premature graying of the hair.

**CAPILLARIES:** tiny blood vessels that deliver oxygen and nutrients to and remove waste products from cells.

**CARBOHYDRATE:** an organic molecule composed mainly of carbon, hydrogen, and oxygen atoms. Carbohydrates constitute a major class of nutrients, and are present in foods such as bread and pasta.

**CARCINOGEN:** an agent that promotes the development of cancer.

**CARCINOMA:** a malignant tumor of the epithelial cells that line body surfaces and cavities. Carcinoma in situ refers to an early stage of cancer that has not invaded surrounding tissues.

**CARDIAC:** having to do with the heart.

**CARDIOVASCULAR:** having to do with the circulatory system (the heart and blood vessels).

**CARRIER:** a person who does not show symptoms or have active disease, but who carries an infectious organism and can transmit it to others.

**CASE STUDY:** a description of a specific clinical case, that is, the development of disease and response to treatment in a single individual.

**CASUAL CONTACT:** non-intimate contact between individuals (e.g., hugging, eating, working together) that does not involve transfer of body fluids and therefore does not pose a risk for transmission of blood-borne diseases.

**CBC:** see complete blood count.

**CD4 CELL: (CD4 LYMPHOCYTE, T-HELPER CELL):** a type of white blood cell that helps the body fight infection.

**CD4 CELL COUNT:** the number of CD4 lymphocytes in one cubic millimeter (mm<sup>3</sup>) of blood. The CD4 count is one indicator of the progression of HIV disease. A CD4 count below 200 cells/mm<sup>3</sup> is a diagnostic criteria for AIDS.

**CD8 CELL (CD8 LYMPHOCYTE):** a type of white blood cell that helps regulate and/or carry out the body's immune response. CD8 cells include T-suppressor cells and cytotoxic T-lymphocytes.

**CDC:** see Centers for Disease Control and Prevention.

**CELL:** the basic unit of living organisms. A cell contains a nucleus and a cell wall (in plants) or a cell membrane (in animals) which surrounds the cellular material, called cytoplasm.

**CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC):** the U.S. federal government agency within the Department of Health and Human Services that monitors the occurrence of diseases and develops policies for preventing disease and maintaining the health of the population.

**CENTRAL NERVOUS SYSTEM (CNS):** the brain and spinal cord.

**CEREBRAL VASCULITIS:** a disorder characterized by inflammation and cell death in arteries.

**CEREBROVASCULAR:** having to do with the flow of blood to the brain.

**CEREBROVASCULAR ACCIDENT:** see stroke.

**CESAREAN SECTION (C-SECTION):** a delivery procedure that involves making an incision through the abdominal wall to remove an infant from the uterus (womb).

**CEVR:** see complete early virological response.

**CFIDS:** chronic fatigue immune dysfunction syndrome. See chronic fatigue syndrome.

**CHEMOKINE:** a chemical, secreted by certain immune system cells, that acts as a messenger between cells and stimulates the activity of cells.

**CHEMOTHERAPY:** the use of drugs to treat disease.

**CHIROPRACTIC:** a system of treatment based on manipulation of the spine.

**CHOLANGITIS:** inflammation of the bile duct, often characterized by jaundice.

**CHOLESTASIS:** obstruction of the flow of bile between the liver, the gall bladder, and the small intestine.

**CHOLESTEROL:** a fatty substance in animal tissue that is an essential component of cell membranes, certain hormones, and nerve fiber insulation. Cholesterol is manufactured by the liver, and is also present in certain foods. There are two primary types of cholesterol in the blood, low-density lipoprotein (LDL), which is considered a risk factor for heart disease; and high-density lipoprotein (HDL), which is considered protective.

**CHOOSE MYPLATE:** a visual diagram showing which foods are part of the daily recommended amounts included in a balanced diet. A healthy diet includes 6 to 11 servings of breads and grains 3 to 5 servings of vegetables; 2 to 4 servings of fruit; 2 to 3 servings of meat, fish, beans, or nuts; 2 to 3 servings of dairy products; and limited fats and oils.

**CHRONIC:** a long-term or persistent disease. Contrast with acute.

**CHRONIC HEPATITIS:** a condition in which HCV or HBV continues to replicate and infect new cells after six months.

**CHRONIC FATIGUE SYNDROME (CHRONIC FATIGUE IMMUNE DYSFUNCTION SYNDROME, CFIDS):** see Systemic Exertion Intolerance Disease.

**CHRONIC HBV:** a term for lifelong infection of hepatitis B.

**CHRONIC HEPATITIS:** liver inflammation lasting longer than six months.

**CIRRHOSIS:** a type of liver damage in which normal liver cells are replaced with fibrous scar tissue. In compensated cirrhosis, the liver is damaged but can still function. In decompensated cirrhosis, liver function is severely impaired and scar tissue interferes with normal blood flow through the liver, potentially leading to bleeding varices, ascites, "brain fog," and other symptoms.

**CLEARANCE:** removal or elimination, e.g., of a virus or drug from the body.

**CLINICAL:** relating to the treatment of patients. A clinical observation is based on a person's observed condition and symptoms, as distinguished from laboratory findings.

**CLINICAL TRIAL (CLINICAL STUDY):** an organized procedure for determining the effectiveness of a new drug or therapy by administering the agent to volunteers under controlled conditions. In many clinical trials, new treatments are compared against older standard treatments or an inactive substance (placebo).

**CLOT:** a sticky mass of coagulated blood cells and platelets.

**CLOTTING FACTOR (COAGULATION FACTOR):** a protein (e.g., fibrinogen, prothrombin, Factor VIII) that is necessary for normal blood clotting. Several clotting factors are synthesized by the liver and production may be impaired when the liver is damaged. People with clotting factor deficiencies may experience prolonged bleeding and easy bruising.

**COBALAMIN:** see vitamin B12.

**COENZYME Q10:** an antioxidant agent that is necessary for the proper activity of certain enzymes.

**COFACTOR:** a factor that influences the progression of a disease or the action of a disease-causing agent.

**COFORMULATION:** a combination of two or more medications combined into one medication. Examples include sofosbuvir/ledipasvir (Gilead) and ABT-450/ritonavir/dasabuvir (Abbvie).

**COGNITIVE DYSFUNCTION:** reduction in mental functioning and ability to carry out tasks that require thinking, planning, and memory.

**COHORT:** a group of individuals in a study who share a demographic, clinical, or other characteristic.

**COINFECTION:** concurrent infection with more than one disease-causing organism (e.g., HCV and HIV).

**COLONY-STIMULATING FACTOR (CSF):** a cytokine responsible for regulating the production of white blood cells. Types include granulocyte colony-stimulating factor (G-CSF) and granulocyte macrophage colony-stimulating factor (GM-CSF).

**COLOSTRUM:** breast fluid produced during the first few days after a baby's birth (prior to milk production) that contains proteins, immunoglobulins, and immune cells.

**COMA:** a state of deep unconsciousness; a vegetative state.

**COMBINATION THERAPY:** use of two or more drugs together to improve the effectiveness of treatment. In HCV treatment, the term most often refers to the use of two or more HCV inhibitors with and without ribavirin. Contrast with monotherapy.

**COMPASSIONATE USE:** an FDA classification that allows individuals to use experimental drugs prior to their approval for a serious illness for which there is no other suitable treatment.

**COMPENSATED CIRRHOSIS:** see cirrhosis.

**COMPLEMENTARY THERAPY:** an alternative therapy that is used in conjunction with a standard Western treatment.

**COMPLETE BLOOD COUNT (CBC):** an inventory of the cellular components of the blood, including red blood cell count, hematocrit and hemoglobin, white blood cell count, and platelet count.

**COMPLETE EARLY VIROLOGICAL RESPONSE (cEVR):** HCV RNA negative at treatment week 12.

**COMPUTED TOMOGRAPHY SCAN: (CT SCAN):** a method of viewing the soft tissues of the body using X-rays.

**CONDOM:** a sheath made of latex, polyurethane, or animal membrane that is worn over the penis to hold ejaculated semen. Condoms are used to prevent pregnancy; latex and polyurethane condoms also protect against HIV, HCV and certain other sexually transmitted diseases. The "female condom" (Reality) is an internal pouch worn inside the vagina or anus.

**CONFIDENCE INTERVAL:** a statistical measure of the likelihood that an experimental result is "true" and not the result of chance alone.

**CONGENITAL:** present from birth.

**CONGESTIVE HEART FAILURE:** heart dysfunction that leads to a build-up of fluids in the body.

**CONJUNCTIVITIS:** inflammation of the conjunctiva, a membrane that covers the eye and lines the eyelid.

**CONTRACEPTION:** birth control; a device or method that prevents conception (fertilization), implantation, or successful gestation.

**CONTRAINDICATION:** any circumstance or condition that makes a drug or other method of treatment inadvisable in a particular case.

**CONTROL ARM:** a comparison group in a clinical trial that is used to verify an experimental result. A control group is typically given an older standard treatment or a placebo rather than the new experimental treatment under study.

**CONTROLLED TRIAL:** a clinical trial in which a group receiving an experimental treatment is compared to a control group that is given a standard treatment or a placebo.

**COPEGUS:** Genentech/Roche's brand of ribavirin. see RIBAVIRIN.

**CORE:** the inner part of a virus that contains its genetic material.

**CORONARY ARTERY DISEASE:** damage to or blockage of the arteries that provide blood to the heart muscle.

**CORTICOSTEROID:** a steroid hormone (e.g., prednisone, cortisone) produced by the cortex of the adrenal gland or manufactured synthetically. Corticosteroids have anti-inflammatory and immunosuppressive properties, and are used to treat a variety of conditions.

**CREATININE:** a metabolic byproduct produced by muscles; high levels in the blood may indicate kidney dysfunction.

**CREST SYNDROME:** a type of scleroderma characterized by a variety of different symptoms (primarily calcinosis, Raynaud's phenomenon, esophageal dysfunction, sclerodactyly, and telangiectasia).

**CRYOGLOBULIN:** an abnormal immune protein.

**CRYOGLOBULINEMIA:** a condition in which cryoglobulins form in the blood. When the blood is cooled, the cryoglobulins clump together, causing the blood to thicken and restricting blood flow. Essential mixed cryoglobulinemia occurs in many people with HCV, although most do not experience symptoms.

**CRYOSURGERY:** removal of damaged or cancerous tissue by freezing.

**CT SCAN:** see computed tomography scan.

**CULTURE:** a method of growing a microorganism in a laboratory.

**CUNNILINGUS:** oral sex on a woman; contact between the mouth and the vulva or vagina.

**CURE:** see sustained virological response.

**CUTANEOUS:** relating to the skin.

**CYSTEINE:** an amino acid; one of the building blocks of glutathione.

**CYTOKINE:** a chemical messenger (e.g., interferon, interleukin, tumor necrosis factor) produced by white blood cells. Cytokines coordinate several aspects of the immune response, including stimulating antibody production and activating killer T-cells.

**CYTOPENIA:** low levels of blood cells.

**CYTOPLASM:** the material that makes up the interior of a cell.

**CYTOPROTECTIVE:** an agent that protects cells from damage.

**CYTOTOXIC T-LYMPHOCYTE (CTL, KILLER T-CELL):** a type of CD8 white blood cell that targets and kills cells infected with viruses, bacteria, parasites, and other microorganisms.

## D

**DAAS:** see direct-acting antivirals.

**DACLATASVIR:** see Daklinza.

**DALKINZA:** A hepatitis C drug combined with sofosbuvir used to treat hepatitis C.

**DASABUVIR:** is an HCV polymerase inhibitor. It is part of the combination of brand name VIEKIRA PAK used to treat hepatitis C.

**DATA (SINGULAR DATUM):** factual information, especially results of an experiment or clinical trial.

**DATA AND SAFETY MONITORING BOARD (DSMB):** an independent group of community representatives and clinical trial experts that evaluates clinical trials for safety and ethics. DSMBs typically examine interim data as a trial progresses and determine whether it should be stopped or allowed to continue based on safety issues and risk-benefit analysis.

**DIDANOSINE (DDI, DDI):** an HIV medication (brand name VIDEX and VIDEX EC). It is a reverse transcriptase inhibitor, used in combination with other antiretroviral drug therapy as part of active antiretroviral therapy (ART). Ribavirin should be avoided if DDI is being used to treat HIV due to the risk of developing lactic acidosis.

**DECOMPENSATED CIRRHOSIS:** see cirrhosis.

**DECOMPENSATION:** a failure of the liver to compensate for damage or injury; decrease or breakdown of liver function.

**DEHYDRATION:** loss or lack of water in the body. Dehydration may result from prolonged vomiting or diarrhea, and may disrupt many bodily processes.

**DELIRIUM:** a state of mental confusion, typically acute and rapid in onset that may be caused by factors including disease, drug use, or high fever.

**DELTA HEPATITIS:** see hepatitis D.

**DEMENTIA:** chronic loss of mental capacity. Dementia may involve progressive deterioration of thinking, memory, and motor function, and may also be associated with personality changes and psychological symptoms such as depression.

**DEMOGRAPHICS:** the characteristics of a population (e.g., sex, race, age).

**DENTAL DAM:** a flat square of latex or plastic, traditionally used for dental surgery, that can be used to protect against the spread of sexually transmitted diseases during oral sex.

**DEOXYRIBONUCLEIC ACID (DNA):** a double-stranded nucleic acid that encodes genetic information. DNA is made up of four chemical building blocks (nucleotides): adenine, cytosine, guanine, and thymine.

**DEPRESSION (DYSTHYMIA):** a mood disorder characterized by prolonged sadness or grief.

**DETOXIFICATION:** removal of toxic (poisonous) substances. Detoxification of the blood is an important function of the liver.

**DIABETES MELLITUS (DM):** a disease caused by insufficient insulin production or lack of responsiveness to insulin. Type 1 (insulin-dependent or juvenile-onset) diabetes results from an inability of the body to produce insulin. Type 2 (non-insulin-dependent or adult-onset) diabetes occurs later in life and is associated with decreased insulin production or insulin resistance.

**DIAGNOSIS:** the determination of the existence of a disease or condition. Diagnosis generally involves an evaluation of a person's medical history, clinical symptoms, and laboratory test results.

**DIALYSIS:** a method for filtering waste from the blood that replaces the function of the kidneys that are not working properly.

**DIARRHEA:** frequent, loose bowel movements. Diarrhea may be caused by a variety of factors, including microorganisms and as a side effect of certain drugs. Persistent diarrhea can lead to dehydration and inadequate nutrient absorption.

**DIETITIAN:** a medical professional specializing in dietetics, the study of nutrition and the use of special diets to prevent and treat disease.

**DIGESTIVE SYSTEM:** the organs (mouth, pharynx, esophagus, stomach, small intestine, large intestine, and anus) associated with ingestion and digestion of food.



**DIRECT-ACTING ANTIVIRALS (DAAs):** there are at least 4 categories of direct antivirals—protease inhibitors, polymerase inhibitors (nucleoside and non-nucleoside inhibitors) and NS5a inhibitors. DAA's target and inhibit viral enzymes that are important for replication of hepatitis C. Also called HCV inhibitors.

**DISCORDANT:** not having the same serostatus, for example a couple in which one partner is HCV positive and the other is HCV negative.

**DIURETIC:** an agent that increases loss of water from the body through urination.

**DM:** see diabetes mellitus.

**DNA:** see deoxyribonucleic acid.

**DOSAGE:** the amount of a drug that is given at one time.

**DOSE-RANGING TRIAL:** a clinical trial in which different doses of a drug are compared to determine which dosage has the best balance of effectiveness and acceptable side effects.

**DOSHA:** one of the three bodily humors (vata, pitta, and kapha,) recognized in Ayurvedic medicine.

**DOUBLE-BLIND:** see blinding.

**DRUG-DRUG INTERACTION (DDI):** a reaction that can occur when multiple drugs are taken together or drugs are taken with certain herbs or foods. Drug interactions may enhance or reduce the action of a drug and may increase its side effects, and could potentially cause life-threatening reactions.

**DRUG RESISTANCE:** the loss of drug effectiveness of a drug that had previously been able to control or kill an organism such as a virus.

**DX:** abbreviation for diagnosis.

**DYSFUNCTION:** lack or loss of normal function.

**DYSPLASIA (ADJECTIVE DYSPLASTIC):** abnormal cell or tissue growth.

**DYSTHYMIA:** see depression.

## **E**

**EARLY VIROLOGICAL RESPONSE (EVR):** 2 log<sub>10</sub> drop in HCV RNA at treatment week 12.

**ELBASVIR:** see ZEPATIER

**ECZEMA:** a type of skin rash.

**EDEMA:** swelling caused by accumulation of fluid in body tissues.

**EFFICACY:** effectiveness; the ability to achieve a desired result.

**ELIGIBILITY CRITERIA:** the criteria of a clinical trial that includes inclusion and exclusion criteria.

**ELISA/ELISA II:** see enzyme-linked immunosorbent assay.

**EMBOLISM:** a blood clot that travels through the bloodstream and becomes lodged in a blood vessel, causing a blockage.

**EMPIRICAL:** information based on data, not on a theory.

**ENCEPHALOPATHY:** disease of the brain. See also hepatic encephalopathy.

**END-OF-TREATMENT RESPONSE (EOT OR ETR):** undetectable HCV RNA at the completion of treatment).

**ENDOCRINE:** endocrine glands are ductless glands that regulate bodily functions via hormones secreted into the bloodstream. The endocrine system includes the hypothalamus, pituitary gland, thyroid, adrenal glands, and gonads (ovaries and testes).

**ENDOSCOPY:** a method of examining the interior of a body cavity or hollow organ (e.g., esophagus, stomach) using an endoscope, a narrow, flexible fiber optic instrument that conducts light.

**ENDOTHELIUM (ADJECTIVE ENDOTHELIAL):** a layer of cells that lines blood and lymph vessels, the heart, and various body cavities.

**ENDPOINT:** a marker of disease progression or treatment outcome. Endpoints may be clinical manifestations (e.g., disease symptoms, death) or laboratory results such as ALT level or viral load (sometimes called surrogate markers). An endpoint of a clinical trial is the outcome—such as safety and effectiveness of the study medications.

**END-STAGE RENAL DISEASE (ESRD):** kidney failure.

**ENROLLMENT CRITERIA:** factors used to determine whether a person is eligible to participate in a clinical trial. See also inclusion criteria, exclusion criteria.

**ENTECAVIR (BRAND NAME BARACLUDE):** A nucleoside analogue produced by Bristol-Myers Squibb that is used to treat chronic hepatitis B. It is recommended as a first line of treatment except in people who have developed lamivudine resistance.

**ENTERIC:** having to do with the intestines.

**ENTERIC HEPATITIS:** see hepatitis E.

**ENVELOPE:** the outer coat of a virus.

**ENZYME:** a protein that induces or accelerates a chemical reaction.

**ENZYME-LINKED IMMUNOSORBENT ASSAY (ELISA, ELISA II):** a laboratory test used to detect the presence of antibodies in the blood.

**EOT:** see end-of-treatment response.

**EPIDEMIOLOGY:** the study of the frequency, distribution, and behavior of a disease within a population.

**EPIVIR:** see lamivudine.

**EPO:** see erythropoietin.

**EPOGEN:** see erythropoietin.

**ERADICATION (VERB ERADICATE):** the complete elimination of an organism from the body.

**ERYTHROCYTE:** a mature red blood cell. Erythrocytes transport oxygen to the tissues of the body.

**ERYTHROPOIETIN (EPOIETIN, EPO):** a hormone produced by the kidneys that stimulates the production of red blood cells. Genetically engineered EPO (brand names Procrit, Epogen) is used to treat certain types of anemia.

**ESOPHAGUS (ADJECTIVE ESOPHAGEAL):** the swallowing tube; the portion of the digestive tract between the mouth and the stomach.

**ESRD:** see end-stage renal disease.

**ESSENTIAL MIXED CRYOGLOBULINEMIA:** see cryoglobulinemia.

**ESTROGEN:** the primary female sex hormone or a synthetic analog. Estrogens stimulate the development of female secondary sex characteristics and regulate the reproductive cycle in women.

**ETIOLOGY:** the cause of a disease.

**EVR:** see early virological response.

**EXACERBATE:** to worsen or make more severe.

**EXPANDED ACCESS:** the distribution of an investigational medication to those who are in highest need and who may not qualify for the drug in clinical trials.

**EXCLUSION CRITERIA:** conditions that disqualify someone from participating in a clinical trial. Contrast with inclusion criteria.

**EXPERIMENTAL ARM:** the group of participants in a clinical trial that receives the new experimental treatment under study.

**EXPERIMENTAL DRUG:** a new drug that is being tested as a treatment for a specific condition and has not yet been approved by the FDA for use.

**EXTRAHEPATIC:** outside the liver.

## F

**FACTOR VIII:** a protein synthesized by the liver that is necessary for proper blood clotting.

**FAILURE TO THRIVE:** a condition in which an infant loses or fails to gain weight and develops at a slower rate than expected.

**FALSE-NEGATIVE:** a negative test result in a person who has the disease or condition being tested. Contrast with false-positive.

**FALSE-POSITIVE:** a positive test result in a person who does not have the disease or condition being tested. Contrast with false-negative.

**FASCICULATION:** an involuntary muscle contraction.

**FAST TRACK:** a designation by the Food and Drug Administration to help facilitate the development and to expedite the review process for an experimental drug that has the potential to address an unmet medical need for a serious or life-threatening condition.

**FATIGUE:** unusual, prolonged, or excessive tiredness.

**FAT-SOLUBLE:** capable of being dissolved in fat. Contrast water-soluble.

**FATTY ACID:** an organic molecule made up of a hydrocarbon chain and a carboxylic acid group. Fatty acids may be saturated, monounsaturated, or polyunsaturated.

**FDA:** see Food and Drug Administration.

**FEBRILE:** having a fever or increased body temperature.

**FECAL-ORAL ROUTE:** a route of transmission of infectious organisms which involves the transfer of fecal matter to the mouth—for example, by ingesting contaminated food or water, oral/anal sex.

**FECES (ADJECTIVE FECAL):** excrement; excreted waste matter.

**FELLATIO:** oral sex on a man; contact between the mouth and the penis.

**FEMALE CONDOM:** see condom.

**FIBROMYALGIA (FIBROMYOSITIS):** a condition characterized by pain throughout the body, often accompanied by fatigue.

**FRIBROMYOSITIS:** see fibromyalgia.

**FIBROSIS (ADJECTIVE FIBROTIC):** liver damage in which fibrous tissue develops and replaces normal cells.

**FIBRINOGEN:** a factor produced by the liver that is necessary for proper blood clotting.

**FIBROSCAN:** also called transient elastography is a technique that is used to assess the stiffness of the liver, i.e., the degree of the liver damage or scarring.

**FILGRASTIM:** see granulocyte colony-stimulating factor.

**FINE-NEEDLE ASPIRATION BIOPSY:** a type of liver biopsy in which a tissue sample is withdrawn using a very fine needle.

**FLARE (FLARE-UP):** a sudden, acute worsening of disease symptoms.

**FLATULENCE:** excessive intestinal gas.

**FLAVIVIRUS:** a group of viruses, several of which cause diseases in humans. HCV is related to flaviviruses, and some taxonomists consider the Hepacivirus genus to be part of the Flaviviridae family.

**FLUMADINE:** see rimantadine.

**FOLIC ACID (FOLATE):** a vitamin necessary for red blood cell production and proper neurological function; folic acid also helps prevents neural tube defects in fetuses.

**FOOD AND DRUG ADMINISTRATION (FDA):** the U.S. federal agency responsible for regulating the development, use, and safety of drugs, medical devices, cosmetics, and related products. The FDA approves new experimental drugs based on the results of clinical trials.

**FREE RADICAL:** a molecule that contains an unpaired electron. Free radicals are a byproduct of normal metabolism. They are highly reactive and bind with other molecules. The "theft" of electrons by free radicals can disrupt normal cellular processes and cause cellular damage (oxidative stress). See also antioxidant.

**FULMINANT:** an unusually severe or aggressive form of a disease.

**FULMINANT HEPATITIS:** a severe, life-threatening form of hepatitis.

## G

**GALL BLADDER:** an organ beneath the liver where bile is stored.

**GAMMA GLOBULIN:** a preparation of antibodies injected to prevent or treat infection. Gamma globulin is used as post-exposure prevention for hepatitis A and hepatitis B.

**GAMMA-GLUTAMYL TRANSPEPTIDASE (GGT):** a liver enzyme. Elevated GGT levels may indicate bile obstruction and liver damage. A normal GGT level is 30 to 60 IU/L.

**GAN CAO:** see licorice root.

**GASTROENTERITIS:** inflammation of the stomach and intestines.

**GASTROENTEROLOGY (ALSO GASTROENTEROLOGIST):** the medical specialty that deals with the digestive system; a gastroenterologist treats digestive diseases.

**GASTROINTESTINAL:** having to do with the digestive system, especially the stomach and intestines.

**GASTROINTESTINAL TRACT:** the digestive tube consisting of the mouth, esophagus, stomach, small intestine, large intestine, and anus.

**GB VIRUS C (GBV-C):** see hepatitis G virus.

**G-CSF:** see granulocyte colony-stimulating factor.

**GENE: (ADJECTIVE GENETIC):** the basic unit of heredity. Genes contain hereditary information encoded in the form of DNA (or RNA in some viruses). In animal and plant cells, genes are located on the chromosome in a cell's nucleus.

**GENE THERAPY:** an approach to preventing or treating disease by replacing, removing, or introducing genes, or otherwise manipulating genetic material.

**GENERIC DRUG:** a drug that is not protected by a patent and may be produced by any manufacturer.

**GENERIC NAME:** a common name used to identify a drug, as opposed to a brand name used by a particular company for marketing (e.g., pegylated interferon is the generic name of the drug marketed under the brand names Peg-Intron and Pegasys).

**GENETIC ENGINEERING:** manipulation of an organism's genetic material to modify the proteins it produces.

**GENETIC MATERIAL:** deoxyribonucleic acid (DNA) and ribonucleic acid (RNA), the molecules that carry hereditary information.

**GENOME:** the complete genetic code or "blueprint" of an organism.

**GENOTYPE:** the genetic makeup of an organism. HCV has seven major genotypes (designated by the numbers 1 through 7). In the U.S. genotype 1a/b is most prevalent. See also quasispecies.

**GI:** see gastrointestinal.

**GLOBULIN:** see immunoglobulin.

**GLOMERULUS (PLURAL GLOMERULI):** a small capillary bed in the kidney where blood filtration takes place.

**GLOMERULONEPHRITIS:** an inflammatory disorder of the glomeruli, often due to the build-up of cryoglobulins.

**GLUCONEOGENESIS:** the conversion of glycogen to glucose in the liver.

**GLUCOSE (BLOOD SUGAR):** a form of sugar that is the body's primary fuel. The liver stores glucose after meals and releases it again as needed. Abnormally low or high levels of glucose in the blood may indicate a metabolic disturbance (e.g., diabetes).

**GLUCOSE-6-PHOSPHATE DEHYDROGENASE (G6PD):** a human red blood cell enzyme. G6PD deficiency can cause severe anemia.

**GLUCOSIDASE INHIBITORS:** Inhibitors of endoplasmic reticulum (ER),  $\alpha$ -glucosidase has been shown to inhibit viral replication and secretion.

**GLUTATHIONE:** a natural antioxidant found in the body.

**GLYCINE:** an amino acid; one of the building blocks of glutathione.

**GLYCOGEN:** a carbohydrate stored in body tissues. The liver converts glucose from food into glycogen and stores it for later use. When needed, the liver converts glycogen back into glucose.

**GLYCYRRHIZIN:** see licorice root.

**GM-CSF:** see granulocyte macrophage colony-stimulating factor.

**GRAFT:** a transplanted organ or tissue.

**GRANULOCYTE:** a type of immune system white blood cell (e. g., neutrophil, basophil, eosinophil) that releases toxic chemicals to kill invading microorganisms and mediate allergic reactions.

**GRANULOCYTE COLONY-STIMULATING FACTOR (G-CSF):** a cytokine that stimulates the production of granulocytes. Genetically engineered G-CSF (filgrastim; brand name Neupogen) is used to treat neutropenia.

**GRANULOCYTE MACROPHAGE COLONY-STIMULATING FACTOR (GM-CSF):** a cytokine that stimulates growth of granulocytes and macrophages, two types of white blood cell. Genetically engineered GM-CSF (sargramostim; brand names Leukine, Prokine) is used to treat neutropenia.

**GRANULOCYTOPENIA:** an abnormally low number of granulocytes in the circulating blood, which may lead to an increased risk of bacterial infection. In practice, the term is used to refer to neutropenia.

## H

**HALF-LIFE:** the time required for half of the original amount of a drug to be eliminated from the body, or for a drug to decrease to half its original concentration in the blood.

**HARVONI:** a combination of sofosbuvir and ledipasvir combined into one pill taken once-a-day to treat hepatitis C.

**HAS:** see hepatic arterial stenosis.

**HAT:** see hepatic arterial thrombosis.

**HBCAB:** Hepatitis B core antibody is produced by the body and indicates that someone has been or is currently infected with hepatitis B.

**HBEAB:** Hepatitis B “e” antibody is produced by the body and it is an indication that HBV medications or the body is naturally fighting off the virus. Typically people who have the ‘e’ antibody have low HBV DNA (viral load) levels.

**HBSAB:** Hepatitis B surface antibody is an antibody produced by the body that indicates a person is protected from becoming infected with hepatitis B.

**HBEAG:** Hepatitis “e” antigen is a protein of the virus and indicates that the virus is actively replicating in the liver and that a person’s blood and bodily fluids are highly infectious.



**HBeAg SEROCONVERSION:** A marker used to indicate successful treatment of chronic HBV with the loss of HBeAg (“e” antigen) and the development of the HBeAb (“e” antibody).

**HBIG:** Hepatitis B immune globulin provides short-term protection for people exposed to hepatitis B. It is also given to infants born to HBV-infected mothers along with the infant vaccine to reduce the risk of chronic infection.

**HBSAg:** Hepatitis B surface antigen is a protein of the virus that is the first to appear after infection. Continued presence of HBsAg for 6 months indicates chronic infection.

**HBV DNA:** Hepatitis B deoxyribonucleic acid is the type and name of the virus. HBV DNA or viral loads are measured in international units or copies.

**HBV RESISTANCE:** Development of HBV mutations during HBV drug treatment that allows HBV to replicate and evade the effects of the HBV medications.

**HCC:** see hepatocellular carcinoma.

**HCT:** see hematocrit.

**HCV RNA:** the genetic material of the hepatitis C virus. A detectable level of HCV RNA on a viral load test indicates that HCV is actively replicating.

**HELICASE INHIBITOR:** a drug that inhibits the action of a virus' helicase enzyme, thus preventing the viral genetic material from unwinding, and interfering with viral replication.

**HEMATOCRIT (HCT):** the percentage of red blood cells in a given amount of whole blood; the hematocrit reflects the oxygen-carrying capacity of the blood. A normal hematocrit is 40 to 54% for adult men and 37 to 47% for adult women.

**HEMATOLOGICAL:** having to do with the blood.

**HEMATOPOIESIS:** the production of blood cells in the bone marrow. Hematopoietic stem cells give rise to all types of red and white blood cells.

**HEME:** the iron-based pigment in red blood cells, a component of hemoglobin that is released when red blood cells are broken down.

**HEMOCHROMATOSIS:** iron overload disease; a disease in which iron is not properly metabolized and builds up in tissues throughout the body, especially in the liver.

**HEMODIALYSIS:** is a process in which a machine filters toxins and waste products from the blood; it is used when the kidneys are no longer able to filter the blood.

**HEMOGLOBIN (HGB):** the red, iron-based pigment in red blood cells that enables them to transport oxygen. Also refers to a test of the amount of hemoglobin in red blood cells.

**HEMOLYSIS:** the breakdown or destruction of red blood cells.

**HEMOLYTIC ANEMIA:** a low red blood cell count due to excessive cell destruction.

**HEMOPHILIA:** a hereditary disease in which a person does not produce sufficient blood clotting factors and is prone to prolonged bleeding.

**HEMORRHAGE:** bleeding.

**HEPACIVIRUS:** a genus of viruses that includes HCV.

**HEPATIC:** having to do with the liver; also, an herbal remedy used to treat liver conditions.

**HEPATIC ARTERIAL STENOSIS (HAS):** narrowing of the hepatic artery.

**HEPATIC ARTERIAL THROMBOSIS (HAT):** the formation of clots in the hepatic artery.

**HEPATIC ARTERY:** the blood vessel that delivers oxygen-rich blood to the liver.

**HEPATIC COMA:** loss of consciousness due to advanced liver disease. When the liver is damaged, it cannot remove toxins from the body; these toxins build up in the bloodstream causing brain damage and other symptoms. Hepatic coma is an indication of advanced liver failure.

**HEPATIC ENCEPHALOPATHY:** impaired brain function due to advanced liver damage; this occurs when the damaged liver can no longer effectively filter toxins from the bloodstream.

**HEPATIC PANEL:** see liver function tests.

**HEPATIC RESECTION:** surgical removal of part of the liver; may be done to treat liver cancer.

**HEPATIC VEIN:** the blood vessel that carries filtered blood from the liver to the heart.

**HEPATITIS:** inflammation of the liver. Hepatitis may have various causes, including viruses, toxins, and heavy alcohol consumption.

**HEPATITIS A (INFECTIOUS HEPATITIS):** a viral disease of the liver that is primarily transmitted by the fecal-oral route. Symptoms may include fever, fatigue, nausea, and jaundice. Hepatitis A typically resolves on its own and does not become chronic. There is no standard treatment for hepatitis A, but an effective vaccine is available.

**HEPATITIS A VIRUS (HAV):** the virus that causes hepatitis A.

**HEPATITIS B (SERUM HEPATITIS):** a viral disease of the liver. Hepatitis B is a blood-borne disease, but may also be transmitted sexually or vertically from mother to child. Symptoms

may include fever, fatigue, abdominal pain, jaundice, and elevated liver enzymes. Hepatitis B becomes chronic in about 5 to 10% of infected adults. Standard treatments for hepatitis B are interferon and lamivudine; an effective vaccine is available.

**HEPATITIS B IMMUNOGLOBULIN (HBIG):** a preparation of antibodies administered as postexposure prophylaxis to prevent illness in people exposed to the hepatitis B virus.

**HEPATITIS B VIRUS (HBV):** the virus that causes hepatitis B.

**HEPATITIS C (FORMERLY NON-A / NON-B HEPATITIS):** a viral disease of the liver. Hepatitis C is a blood-borne disease; in rare cases it may be transmitted sexually or vertically from mother to child. Symptoms may include fever, fatigue, abdominal pain, jaundice, and elevated liver enzymes. Chronic hepatitis C can lead to long-term liver damage. Standard treatment for hepatitis C is a combination of interferon (standard or pegylated) plus ribavirin; there is currently no vaccine.

**HEPATITIS C VIRUS (HCV):** the virus that causes hepatitis C.

**HEPATITIS D (DELTA HEPATITIS):** a viral disease of the liver. Hepatitis D is caused by a blood-borne virus that only causes disease in people already infected with hepatitis B.

**HEPATITIS D VIRUS (HDV):** the virus that causes hepatitis D.

**HEPATITIS E (ENTERIC HEPATITIS):** a viral disease of the liver. Hepatitis E is spread through the fecal-oral route. The disease is rare in the U.S., but common in Africa and Asia. It is usually mild, but may be severe and possibly fatal in pregnant women.

**HEPATITIS E VIRUS (HEV):** the virus that causes hepatitis E.

**HEPATITIS G VIRUS (HGV, GB VIRUS C, GBV-C):** a blood-borne virus that appears to be related to hepatitis C. At this time, it is not known to cause disease.

**HEPATOCELLULAR CARCINOMA (HCC):** a type of primary liver cancer seen in some people with long-term liver damage due to chronic hepatitis C or hepatitis B.

**HEPATOCELLULAR NECROSIS:** concerning localized liver cell tissue death.

**HEPATOCTE:** a liver cell.

**HEPATOLOGY (ALSO HEPATOLOGIST):** the medical specialty that deals with the liver; a hepatologist treats liver disease.

**HEPATOMEGALY:** enlargement of the liver.

**HEPATORENAL SYNDROME:** pertaining to the kidney failure in the presence of liver disease.

**HEPATOTOXICITY (ADJECTIVE HEPATOTOXIC):** toxic or poisonous to the liver.

**HERBALISM (HERBAL THERAPY):** the medicinal or therapeutic use of plants or plant products.

**HERPES:** a common viral infection that can cause fever blisters, genital sores, and shingles.

**HGB:** see hemoglobin.

**HISTAMINE:** a cellular compound that is released in response to an allergen and causes the symptoms of allergic reactions.

**HISTOLOGY (ADJECTIVE HISTOLOGICAL):** the study or examination of body tissues. In people with HCV, histological improvement refers to improved liver tissue health, including decreased inflammation and reduced fibrosis or cirrhosis.

**HISTOLOGICAL RESPONSE:** an improvement in liver tissue condition (e.g., reduced inflammation) in response to treatment.

**HIV:** see human immunodeficiency virus.

**HIV DISEASE:** infection with the human immunodeficiency virus, which attacks the body's immune system. AIDS is the late, symptomatic stage of HIV disease.

**HODGKIN'S DISEASE:** tumor or cancer of the lymphatic system.

**HOMEOPATHY:** an alternative healing system based on the theory that "like cures like." Homeopathic therapy uses extremely diluted doses of substances that normally cause the types of symptoms being treated.

**HOMEOSTASIS:** the state of equilibrium of the body to maintain a stable internal environment.

**HORMONE:** a chemical messenger (e.g., adrenaline, testosterone) involved in the regulation and coordination of bodily or cellular functions. Hormones may act locally or be secreted into the bloodstream.

**HORMONE REPLACEMENT THERAPY (HRT):** the administration of hormones to replace those that the body is unable to produce; typically refers to estrogen replacement therapy in postmenopausal women.

**HOST CELL:** a cell infected with a virus or other microorganism.

**HUMAN IMMUNODEFICIENCY VIRUS (HIV):** a slow-acting retrovirus associated with AIDS. HIV is transmitted through blood-to-blood contact, sexual activity, or from mother to child.

**HUMAN LEUKOCYTE ANTIGEN (HLA):** a genetic marker of "self" which prevents the immune system from attacking the body's own tissues.

**HYPERBILIRUBINEMIA:** an excess level of bilirubin in the blood, characterized by jaundice, pale-colored stools, and dark urine.

**HYPERCHOLESTEREMIA:** a high level of cholesterol in the blood.

**HYPERGLOBULINEMIA:** an abnormally high level of immunoglobulins (antibodies) in the blood.

**HYPERGLYCEMIA:** high blood sugar.

**HYPERTENSION:** high blood pressure.

**HYPERTHYROIDISM:** increased thyroid gland activity and thyroid hormone overproduction

**HYPERTROPHIC CARDIOMYOPATHY (HCM):** a disease of the heart where enlargement and thickening develops in one part of the heart.

**HYPOALBUMINEMIA:** a low level of the blood protein albumin.

**HYPOTHESIS:** an assumption or theory used to guide a scientific investigation.

**HYPOTHYROIDISM:** decreased thyroid gland activity and reduced thyroid hormone production

## I

**IBUPROFEN:** a nonsteroidal anti-inflammatory drug used to relieve pain and reduce fever. Advil, Aleve, and Motrin are common brand names.

**ICTERUS:** see jaundice.

**IDIOPATHIC:** a term used to describe a disease or condition of unknown cause or origin.

**IDU:** see injection drug user.

**IFN:** see interferon.

**IG:** immunoglobulin; see antibody.

**IL28B:** see interleukin 28B

**IMMUNE CLEARANCE:** A phase of chronic HBV that is marked by increased levels of ALT and HBV DNA (viral load). During this phase there is more damage occurring in the liver.

**IMMUNE GLOBULIN:** see antibody.

**IMMUNE RESPONSE:** the activity of the immune system, for example against an outside invader (e.g., bacteria, virus), cancerous cells, or the body's own tissues (autoimmune response).

**IMMUNE SYSTEM:** the body's defense system that protects against foreign invaders (e.g., bacteria, viruses). Some immune defenses are nonspecific (e.g., phagocytosis), while others are directed against specific invaders (e.g., antibody production). Organs of the immune system include the lymph nodes, spleen, thymus, and tonsils.

**IMMUNE TOLERANT:** a phase of chronic HBV when HBV DNA levels are high, but ALT levels are low. This indicates that there is little liver damage occurring.

**IMMUNITY:** resistance to disease; the body's ability to recognize and defend against outside invaders and cancerous cells. Immunity may be either natural or acquired (for example, artificially induced through a vaccine).

**IMMUNIZATION:** the process by which a person is protected against illness caused by a pathogen (e.g., bacteria, virus). Active immunization (vaccination) involves exposing a person to antigens to prompt the body to mount an immune response (e.g., production of antibodies). Passive immunization involves the injection of an antibody preparation (e.g., gamma globulin).

**IMMUNOCOMPETENT:** capable of mounting an immune response.

**IMMUNOCOMPROMISE:** see immunodeficiency.

**IMMUNODEFICIENCY:** inability of the immune system to work properly, resulting in increased susceptibility to disease.

**IMMUNOGLOBULIN:** see antibody.

**IMMUNOMODULATOR:** an agent that influences the body's immune response.

**IMMUNOSUPPRESSION:** see immunodeficiency.

**IMMUNOSUPPRESSIVE:** a drug or other agent that decreases immune system function.

**IMMUNOTHERAPY (IMMUNE-BASED THERAPY):** a therapy that attempts to modify or enhance the immune response or reconstitute a damaged immune system.

**IMPDH INHIBITOR:** see inosine monophosphate dehydrogenase inhibitor.

**INACTIVE CARRIER:** A phase of chronic HBV that is marked by low HBV DNA, and ALT levels indicating less damage occurring in the liver.

**INCIVEK (GENERIC NAME TELAPREVIR):** an HCV protease inhibitor (taken in combination with pegylated interferon plus ribavirin) used to treat hepatitis C. It is no longer used to treat chronic hepatitis C.

**INCIDENCE (ALSO INCIDENCE RATE):** the number of new cases of a disease or condition in a specific population during a given period of time. The incidence rate is determined by dividing the number of new cases by the total population. Contrast with prevalence.

**INCLUSION CRITERIA:** conditions that a person must meet in order to be eligible for a clinical trial. Contrast with exclusion criteria.

**INCUBATION PERIOD:** the period of time between initial exposure to an infectious microorganism and the development of disease symptoms.

**IND:** acronym for Investigational New Drug.

**INDUCTION THERAPY:** the initiation phase of a particular treatment. Typically induction therapy uses higher or more frequent doses of a drug. Contrast with maintenance therapy.

**INFECTION:** a condition in which the body is invaded by an infectious organism (e.g., bacteria, virus, fungus).

**INFECTIOUS:** a disease or condition that can be transmitted from one person to another.

**INFECTIOUS HEPATITIS:** see hepatitis A.

**INFERGEN:** brand name of interferon alfacon 1 consensus interferon.

**INFLAMMATION:** the body's response to tissue injury or infection, typically characterized by redness, swelling, heat, and pain.

**INFORMED CONSENT:** a mechanism designed to protect subjects in clinical trials. Before entering a trial, participants must sign a form stating that they have been given and understand important information about the trial (including possible risks and benefits) and voluntarily agree to take part.

**INFUSION:** direct injection (e.g., of a drug, nutrients) into the bloodstream.

**INHIBITOR:** an agent that inhibits or blocks an activity.

**INJECTION DRUG USER (IDU):** a person who uses an illegal drug (e.g., heroin, cocaine) administered with a needle and syringe. The terms intravenous drug user (IVDU) and people who inject drugs (PWID) are also sometimes used.

**INOSINE MONOPHOSPHATE DEHYDROGENASE (IMPDH) INHIBITOR:** an agent (e.g., ribavirin) that interferes with the synthesis and storage of guanine, thus inhibiting viral replication.

**INSOMNIA:** inability to sleep.

**INSTITUTIONAL REVIEW BOARD: (IRB):** a multidisciplinary group that reviews and ensures the ethical conduct of clinical trials that include human participants.

**INSULIN:** a peptide hormone produced in the pancreas that enables cells to use glucose. Lack of or insensitivity to insulin results in diabetes.

**INSULIN RESISTANCE:** a condition in which the body's tissues cannot properly use insulin, leading to blood sugar imbalances.

**INTENT-TO-TREAT ANALYSIS:** a method of analyzing the results of a clinical trial in which all participants who were originally assigned to an arm are analyzed, including those who dropped out due to treatment failure or side effects. Contrast with as-treated analysis.

**INTERFERON (IFN):** a cytokine (messenger protein) that plays a role in immune response. The three major classes of interferon are alpha, beta, and gamma.

**INTERFERON-ALPHA:** a naturally occurring protein produced by the immune system that interferes with viral replication. Interferon-alpha (brand names include Intron-A, Roferon-A).

**INTERLEUKIN (IL):** a cytokine (chemical messenger), secreted by immune system blood cells, that regulates a range of immune functions.

**INTERLEUKIN 28B (IL28B):** a variation of interleukin that directs an immune response to the hepatitis C virus. IL28B is categorized into genotypes CC, TT, and C/T. IL28B CC genotype produces that strongest immune response against hepatitis C.

**INTERNATIONAL UNIT (IU):** a standard unit of measurement.

**INTERNAL RIBOSOME ENTRY SITE INHIBITOR:** an agent that interferes with the translation of viral genetic material and thus inhibits viral reproduction.

**INTOLERANCE:** inability of the body to tolerate a drug, resulting in adverse side effects.

**INTRACELLULAR:** within a cell.

**INTRAVENOUS (IV):** injected directly into a vein.

**INTRAVENOUS IMMUNOGLOBULIN (IVIG):** an antibody preparation administered intravenously to treat illness in a person whose own immune system does not produce sufficient antibodies.



**INTRON-A:** brand name of interferon-alpha-2b.

**IN UTERO:** in the uterus; refers to events that occur in the womb before birth.

**INVESTIGATIONAL NEW DRUG (IND):** an FDA classification for experimental drugs that are undergoing clinical trials to assess their safety and effectiveness prior to marketing approval.

**INVESTIGATOR:** a clinical researcher who is involved with a clinical trial protocol and its implementation. The Principal Investigator is ultimately responsible for the conduct of the trial.

**IN VITRO:** Latin for "in glass"; refers to studies done in a test tube or culture medium in the laboratory.

**IN VIVO:** Latin for "in a living organism"; refers to studies done using human or animal subjects.

**IRES INHIBITOR:** see internal ribosome entry site inhibitor.

**IRON:** an important trace element needed for the production of hemoglobin in red blood cells. High levels of iron can be toxic to the liver.

**IRON-DEFICIENCY ANEMIA:** the most common type of anemia, caused by a lack of iron.

**ISCHEMIA:** reduced blood supply to bodily tissues.

**ISLET CELL:** a cell in the Islets of Langerhans in the pancreas that produces insulin.

**IU:** see international unit.

**IV:** see intravenous.

**IVDU:** see injection drug user.

**IVIG:** see intravenous immunoglobulin.

## J

**JAUNDICE:** (icterus, icteric) yellowing of the skin and whites of the eyes due to high bilirubin levels in the blood. Jaundice is often a sign of liver damage or gallbladder disease.

## K

**KAYSER-FLEISCHER RINGS:** see Wilson's disease.

**KETONE:** a byproduct of fat metabolism. When the body does not have enough glucose, the liver converts fatty acids into ketones, which are used as fuel by the muscles.

**KIDNEY (ADJECTIVE RENAL):** one of two bean-shaped organs located in the lower back part of the abdominal cavity. The kidneys filter waste material from the blood and excrete urine.

**KIDNEY STONE (NEPHROLITHIASIS):** an accumulation of substances (e.g., drug crystals, minerals) in the kidneys, leading to blockage and pain.

**KUPFFER CELL:** a type of macrophage that resides in the liver and ingests bacteria absorbed from the intestines.

## L

**LACTATION:** production of breast milk.

**LAMIVUDINE (BRAND NAME EPIVIR-HBV):** A nucleoside analogue medicine used to treat chronic hepatitis B and HIV. Lamivudine is not recommended as a first line of HBV treatment because of the high rate of drug resistance.

**LAPAROSCOPIC LIVER BIOPSY:** a type of liver biopsy using a laparoscope.

**LAPAROSCOPY:** a procedure in which a lighted instrument is inserted through an abdominal incision for the purpose of diagnosis, biopsy, or surgery.

**LATENCY: (ADJECTIVE LATENT):** the state in which a disease-causing organism is present in the body, but not actively replicating or causing illness.

**LAXATIVE:** an agent that promotes bowel evacuation (defecation).

**LECITHIN:** a fatty compound required for proper metabolism.

**LEDIPASVIR:** an HCV NS5A inhibitor (used in combination with sofosbuvir as part of brand name HARVONI) used to treat hepatitis C.

**LESION:** a tissue injury or wound.

**LEUKINE:** see granulocyte-macrophage colony-stimulating factor.

**LEUKOCYTE:** an immune system white blood cell (e.g., T-cell, B-cell, neutrophil).

**LICHEN PLANUS:** an inflammatory disease of the skin and mucous membranes characterized by red or purple bumps or blotches. The cause of lichen planus is not known, but it appears to be an autoimmune condition.

**LIPID: A FAT.**

**LIPODYSTROPHY:** a syndrome that involves abnormal lipid metabolism and redistribution of body fat.

**LIPOGENESIS:** production of lipids (fats).

**LIVER:** a large organ on the upper right side of the abdomen that plays an important role in the metabolism of sugars and fats, synthesizes several proteins, and filters toxins from the blood.

**LIVER BIOPSY:** a medical procedure that removes a piece of liver tissue which is then examined under a microscope for inflammation and damage.

**LIVER CANCER:** malignant proliferation of cells in the liver. The most common type of liver cancer in people with chronic hepatitis is hepatocellular carcinoma (HCC).

**LIVER CELL:** see hepatocyte.

**LIVER ENZYME:** see aminotransferase.

**LIVER FUNCTION TESTS (HEPATIC PANEL):** A group of blood tests that measure levels of liver enzymes, proteins, and various other substances. Liver function tests are used to help diagnose liver disease, assess the degree of liver damage and determine how well treatment is working.

**LIVING DONOR:** a person who donates an organ or part of an organ while alive to another person.

**LOBE:** one of the four anatomical divisions of the liver; lobes are further divided into lobules.

**LOBULE OF LIVER:** a structural unit consisting of hepatic (liver) cells shaped like a hexagon with six portal triads surrounding a central vein.

**LOG:** a measure based on the logarithmic scale that refers to quantities in factor of ten. A log change is an exponential, or 10-fold, increase or decrease (e.g., a change from 10 to 100 is a 1-log increase; a change from 1,000,000 to 10,000 is a 2-log decrease). Viral load is sometimes expressed in logs.

**LUPUS:** see systemic lupus erythematosus.

**LYMPH NODE (LYMPH GLAND):** a small, bean-sized organ located throughout the body, with concentrations in the neck, groin, and armpits. Lymph nodes filter out antigens and are the site of immune cell activation.

**LYMPHATIC SYSTEM:** a network of organs and vessels that help maintain the fluid environment of the body and coordinate immune responses. The lymphoid organs include the lymph nodes, spleen, thymus, tonsils, and adenoids.

**LYMPHOCYTE:** a type of white blood cell (e.g., T-cell, B-cell, natural killer cell) that plays a role in the body's immune defense.

**LYMPHOCYTOPENIA:** a deficiency of lymphocytes.

## M

**MACROPHAGE:** a large scavenger white blood cell that ingests and processes foreign invaders and cellular debris. Specialized macrophages protect the skin, lungs (alveolar macrophages), brain (microglia), liver (Kupffer cells), and other tissues.

**MAGNETIC RESONANCE IMAGING (MRI):** a sensitive, non-invasive method for viewing soft tissues of the body using a magnetic field.

**MAINTENANCE THERAPY:** therapy that follows successful initial treatment of an illness; generally maintenance therapy continues for a long period of time (possibly for life) to prevent disease recurrence. Contrast with induction therapy.

**MAJOR HISTOCOMPATIBILITY COMPLEX (MHC):** a group of genes that controls the expression of cell surface protein markers (also known as human leukocyte antigen, or HLA, markers) that allow immune cells to recognize the body's own cells (that is, to distinguish "self" from "non-self").

**MALAISE:** a generalized feeling of illness and discomfort; a flu-like feeling.

**MALIGNANCY:** a cancer, neoplasm, or tumor that grows in an uncontrolled manner, and may invade nearby tissue and metastasize, or spread, to other areas of the body.

**MALIGNANT:** a condition that is severe, harmful, or resistant to treatment. Contrast with benign.

**MALNUTRITION:** lack of the minimum amount of nutrients (proteins, carbohydrates, lipids, vitamins, minerals, etc.) necessary for good health. Malnutrition may result from poor diet, lack of appetite, or inadequate absorption of nutrients from the gastrointestinal tract.

**MEAN: (AVERAGE):** a statistical measurement of the central tendency, or average, of a set of values. For example, in the series of values "1, 1, 3, 5, 6, 8, 8, 10, 21," the mean is 7 (determined by adding up all the values and dividing by the number of values). Contrast with median.

**MEDIAN:** the number within a series that is preceded and followed by an equal number of values. For example, in the series of values "1, 1, 3, 5, 6, 8, 8, 10, 21," the median is 6 (there are four values lower and four values higher). Contrast with mean.

**MEDICAID:** in the United States, a program that is funded by federal and state governments that pays for medical care for those who can't afford it.

**MEDICARE:** in the United States, a program that pays for certain health care expenses for people 65 and older.

**MEDITATION:** a technique for relaxation and clearing and focusing the mind.

**MEGAKARYOCYTE:** a large precursor blood cell that gives rise to platelets.

**MELD:** an acronym for Model End Stage Liver Disease. A severity score or calculation used for adults with liver disease to rank candidates for liver transplantation.

**MEMBRANE:** a thin sheet or layer of tissue that serves as a semi-permeable covering.

**MEMBRANOPROLIFERATIVE GLOMERULONEPHRITIS (MH):** a condition that affects the kidneys that is usually (but not always) associated with cryoglobulinemia. Symptoms include weakness, edema and arterial hypertension. (See also glomerulonephritis)

**MEMBRANOUS NEPHROPATHY:** a disease of the kidneys where HCV antibodies and viral particles are deposited in the kidneys.

**MENOPAUSE:** the cessation of menstruation.

**MENSTRUATION:** a stage of the female reproductive cycle. An ovum (egg) matures and is released every month. Hormones prepare the uterus for possible implantation. If pregnancy does not occur, the uterine lining (blood and tissue) is shed and expelled (the menstrual period).

**MESSENGER RNA (MRNA):** a piece of ribonucleic acid that carries genetic information from DNA to ribosomes in order to synthesize new proteins.

**METABOLISM (ADJECTIVE METABOLIC):** the processes of building the body's molecular structures from nutrients (anabolism) and breaking them down for energy (catabolism). Also, the chemical processing or breakdown of food, drugs, and toxins.

**METASTASIS (ADJECTIVE METASTATIC, VERB METASTASIZE):** a disease (especially cancer) that spreads from one part of the body to another.

**METHADONE:** an oral opiate-like drug used for pain management and to treat opiate (e.g., heroin) addiction. Methadone maintenance therapy prevents withdrawal symptoms by administering small doses of the drug on a regular basis.

**METHIONINE:** see s-adenosylmethionine.

**MILK THISTLE (SILYBUM MARIANUM, SILYMARIN):** the most widely used herbal remedy to treat chronic hepatitis. Silymarin is a combination of active components derived from milk thistle. Studies suggest that milk thistle can reduce hepatitis symptoms and helps prevent liver damage.

**MINERAL:** an inorganic element that promotes chemical reactions within the body and is necessary for proper cellular metabolism. Essential minerals include calcium, iodine, iron, magnesium, potassium, and zinc.

**MISCARRIAGE:** a pregnancy that ends prematurely and is not carried to term.

**MITOCHONDRION (PLURAL MITOCHONDRIA):** a rod-shaped organelle in the cytoplasm of a cell that produces energy.

**MHC:** see major histocompatibility complex.

**MOLECULE:** a small unit of matter made up of atoms. A molecule is the smallest unit of a substance that retains its unique characteristics.

**MONOCLONAL ANTIBODIES:** a preparation consisting of identical antibodies active against a specific pathogen.

**MONOCYTE:** a large white blood cell that plays a role in immune defense. Monocytes circulate in the bloodstream; when they migrate to the tissues, they mature into macrophages.

**MONOGAMY (MONOGAMOUS):** having a single spouse; more often used to refer to having a single sexual partner.

**MONOTHERAPY:** use of a single drug for treatment. Monotherapy for HCV is no longer considered standard treatment. Contrast with combination therapy.

**MOOREN CORNEAL ULCERATION:** a condition affecting the eyes causing pain, inflammation, tearing and loss of sight.

**MORBIDITY:** sickness; the state of being affected by disease.

**MORTALITY (ALSO MORTALITY RATE):** death. The mortality rate is the rate of death in a given population.

**MRI:** see magnetic resonance imaging.

**MRNA:** see messenger RNA.

**MU:** abbreviation for million units.

**MUCOUS MEMBRANE (MUCOSA):** a moist layer of semi-permeable tissue lining the openings of the body (e.g., the gastrointestinal, respiratory, and genitourinary tracts).

**MULTIFOCAL:** occurring at more than one site.

**MULTIPLE MYELOMA:** a form of cancer of the bone marrow that causes anemia, infections, and bleeding.

**MULTIVARIATE ANALYSIS:** a statistical analysis that takes into account several different factors or variables.

**MULTIVITAMIN:** a nutritional supplement that contains several different essential vitamins and minerals.

**MUTATION (VERB MUTATE):** a change in the character of a gene that is perpetuated when a cell divides or a virus replicates.

**MYALGIA:** muscle pain.

**MYELIN:** a white fatty substance that forms a sheath around the axons of neurons (nerve cells) and provides the insulation necessary for the proper transmission of electrical impulses.

**MYELOSUPPRESSION:** inhibition of the bone marrow, resulting in decreased blood cell production.

**MYELOTXIC:** poisonous to or destructive of the bone marrow.

**MYOCARDIAL INFARCTION:** blockage of the arteries serving the heart, often leading to angina pectoris and/or heart attack.

**MYOPATHY:** muscle inflammation, damage, or disease.

## N

**NAC:** see n-acetyl-cysteine.

**N-ACETYL-CYSTEINE (NAC):** a form of the amino acid cysteine that is available as a nutritional supplement. NAC is used to prevent liver damage due to acetaminophen overdose.

**NAIVE:** inexperienced. Often used to describe an individual who has never taken a certain drug, or to an undifferentiated immune system cell.

**NARCOTIC:** see opiate.

**NATURAL HISTORY STUDY:** a study of the natural development of a disease over time.

**NATIONAL INSTITUTES OF HEALTH: (NIH):** a large biomedical research organization that is part of the U.S. Public Health Service. The NIH includes several institutes, centers, and divisions. The National Institute of Allergy and Infectious Diseases (NIAID) and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) conduct research on viral hepatitis.

**NATURAL KILLER (NK) CELL:** a type of white blood cell that attacks and kills tumor cells and cells infected with microorganisms.

**NATUROPATHY:** a system of natural healing based on the philosophy that the body has the ability to cure itself.

**NAUSEA:** stomach distress characterized by an aversion to food and an urge to vomit.

**NDA:** see new drug application.

**NECROSIS:** cell or tissue death.

**NECROINFLAMMATION:** tissue inflammation and death.

**NEONATE (ADJECTIVE NEONATAL):** a newborn, especially within the first days or weeks after birth.

**NEOPLASM (NEOPLASIA):** a tumor or growth; tissue that develops abnormally or cells that proliferate more rapidly than normal. A benign neoplasm (e.g., a wart) is localized and does not spread to other tissues; a malignant neoplasm (cancer) can spread to other parts of the body.

**NEPHROLITHIASIS:** see kidney stone.

**NEPHROTOXICITY:** the property of being poisonous or harmful to the kidneys.

**NEUPOGEN:** see granulocyte colony-stimulating factor.

**NEURALGIA:** nerve pain.

**NEUROPATHY (ADJECTIVE NEUROPATHIC):** nerve damage or disease.

**NEUTROPENIA:** an abnormally low number of neutrophils, resulting in increased susceptibility to infection.

**NEUTROPHIL:** the most common type of immune system white blood cell. Neutrophils are phagocytes that engulf and destroy invading organisms such as bacteria and fungi.

**NEW DRUG APPLICATION (NDA):** an application made by a drug manufacturer to the FDA to request marketing approval for a new drug.

**NIACIN:** see vitamin B.

**NIAID:** National Institute of Allergy and Infectious Diseases. See National Institutes of Health.

**NIDDK:** National Institute of Diabetes and Digestive and Kidney Diseases. See National Institutes of Health.



**NIH:** see National Institutes of Health.

**NK CELL:** see natural killer cell.

**NON-A/NON-B HEPATITIS:** see hepatitis C.

**NON-HODGKIN'S LYMPHOMA (NHL):** cancer of lymphoid tissues.

**NONINVASIVE:** a device or procedure that does not require puncturing the skin.

**NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITOR (NNRTI):** an antiviral drug that suppresses viral replication by interfering with the action of the reverse transcriptase enzyme.

**NONOXYNOL-9:** a chemical formerly used as a spermicide and microbicide. Studies have shown that nonoxynol-9 causes tissue damage and may increase the risk of STD transmission.

**NONRESPONDER:** person who does not show improvement while undergoing treatment. In HCV, a nonresponder does not achieve normal ALT levels or an undetectable viral load.

**NONSTEROIDAL ANTI-INFLAMMATORY DRUG (NSAID):** a drug (e.g., aspirin, acetaminophen, ibuprofen) that relieves pain and reduces inflammation by blocking the body's production of prostaglandins.

**NNRTI:** see non-nucleoside reverse transcriptase inhibitor.

**NS5A INHIBITOR:** an agent that inhibits viral replication of the hepatitis C virus' NS5a enzyme.

**NRTI:** see nucleoside reverse transcriptase inhibitor.

**NSAID:** see nonsteroidal anti-inflammatory drug.

**NUCLEOSIDE ANALOG:** see nucleoside reverse transcriptase inhibitor.

**NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITOR (NRTI, NUCLEOSIDE ANALOG):** a drug that mimics a nucleoside, one of the building blocks of genetic material (DNA or RNA). NRTIs suppress viral replication by interfering with the action of the reverse transcriptase enzyme, causing premature termination of new chains of genetic material. Ribavirin is an NRTI.

**NUCLEOTIDE:** a genetic building block.

**NULL RESPONDER:** a person who does not achieve a 2 log<sub>10</sub> drop of HCV RNA by treatment week 12.

**NUTRIENT:** an agent that promotes proper growth and metabolism.

**NUTRITION:** the process by which living organisms digest and metabolize food to use for maintenance and growth of tissues.

## O

**OFF-LABEL:** use of an FDA-approved drug for an indication other than that for which it was approved.

**OLYSIO:** see simeprevir

**OMBITASVIR:** is an HCV polymerase inhibitor (Ombitasvir is part of brand name VIEKIRA PAK and TECHNIVIE ) that is used to treat hepatitis C.

**ONCOGEN:** an agent that promotes neoplastic cell growth, or cancer.

**ONCOGENESIS:** the development and growth of cancer.

**ONCOLOGIST:** a physician who specializes in the treatment of cancer.

**ONCOLOGY:** the study and treatment of cancer.

**OPEN-LABEL:** a drug trial which is not randomized and not blinded; both participants and investigators know what drug is being tested and what dosages are being used.

**OPIATE (NARCOTIC):** a class of drugs (e.g., heroin, codeine, methadone) that are derived from the opium poppy or produced synthetically and have opium-like effects. Opiate drugs relieve pain, dull the senses, and induce sleep.

**OPPORTUNISTIC ILLNESS (OPPORTUNISTIC INFECTION, OI):** an illness or infection that does not normally occur in a person with a healthy immune system, but affects immunocompromised persons.

**ORAL:** relating to the mouth; taken by mouth.

**ORGANIC FOOD:** food that is grown naturally without the use of chemical fertilizers, pesticides, or other artificial intervention.

**ORPHAN DRUGS:** an FDA category of drugs developed to treat conditions that rarely occur. The FDA offers financial incentives to offset the predicted lower rate of return on the investment in clinical development.

**OSTEOARTHRITIS:** degenerative joint disease.

**OTC:** see over-the-counter.

**OVER-THE-COUNTER (OTC):** drugs that are available without a prescription.

**OXIDATIVE STRESS:** increased levels of free radicals in the body, potentially leading to cell damage and death.

## P

**PALLIATIVE:** offering symptomatic relief and comfort care (e.g., alleviation of pain) rather than a cure.

**PALLOR:** paleness.

**PANCREAS:** a digestive gland in the abdominal cavity that secretes digestive enzymes.

**PANCREATITIS:** inflammation of the pancreas.

**PANCYTOPENIA:** an abnormally low level of all types of blood cells, typically due to bone marrow damage.

**PAN-GENOTYPIC DRUGS:** drugs that have some activity against all of the genotypes of the hepatitis C virus.

**PARACENTESIS:** a procedure to remove fluid that has accumulated in the abdominal cavity—a condition called ascites.

**PARACETOMAL:** see acetaminophen

**PARENTERAL:** nutrients given by injection into a vein, bypassing the gastrointestinal tract.

**PARITAPRE VIR:** a protease inhibitor. It is boosted with low dose ritonavir (paritaprevir is part of brand name VIEKIRA PAK and TECHNIVIE) and is used to treat hepatitis C.

**PATHOGEN (ADJECTIVE PATHOGENIC):** any disease-causing agent, especially a microorganism (bacteria, virus, fungus, parasite).

**PATHOGENESIS:** the development and progression of a disease.

**PATHOLOGY (ADJECTIVE PATHOLOGIC):** the study of disease, including the causes, development, and progression of disease, and how the body is affected.

**PCR:** see polymerase chain reaction.

**PEAK LEVEL:** the highest level of drug reached in the body after a dose is taken. Contrast with trough level.

**PEER REVIEW:** a review of the scientific merit of a clinical trial by independent experts.

**PEGASYS:** brand name of pegylated interferon-alpha-2a.

**PEGINTERFERON:** see pegylated interferon.

**PEG-INTRON:** brand name of pegylated interferon-alpha-2b.

**PEGYLATED INTERFERON (PEGINTERFERON):** a form of interferon that has a long half-life in the body and can be injected less often (typically once per week). Pegylated interferon (brand names Peg-Intron, Pegasys) appears superior to standard interferon.

**PEGYLATION:** a process in which polyethylene glycol (PEG) molecules are attached to proteins in order to extend their activity in the body.

**PEI:** see percutaneous ethanol injection.

**PERCUTANEOUS:** through the skin.

**PERCUTANEOUS ETHANOL INJECTION:** a treatment for hepatocellular carcinoma in which ethanol (alcohol) is injected into the tumor.

**PERIHEPATITIS:** inflammation of the lining of the liver.

**PERINATAL:** the period around the time of birth.

**PERINATAL TRANSMISSION:** see vertical transmission.

**PERIPHERAL NEUROPATHY:** damage to the peripheral nerves, usually involving the feet and hands.

**PERITONEUM:** the thick membrane that lines the abdominal cavity and covers the visceral organs.

**PERITONITIS:** inflammation of the peritoneum.

**PERNICIOUS ANEMIA:** a type of anemia caused by the inability of the intestine to absorb vitamin B12, which is needed to produce red blood cells.

**PHAGOCYTE:** a scavenger cell that engulfs and destroys invading pathogens (phagocytosis).

**PHARMACEUTICAL:** having to do with the development and manufacture of drugs, or to a manufactured drug.

**PHARMACOKINETICS:** the action of drugs in the body, including the processes of absorption, metabolism, distribution to tissues, and elimination.

**PHARMACOLOGY:** the science of drugs, their sources, and how they work.

**PHASE I TRIAL:** the first stage of human testing of a new treatment. Phase I trials evaluate drug pharmacokinetics, safety, and toxicity at different dose levels, typically in a small number of healthy volunteers or in those who have the condition or disease.

**PHASE II TRIAL:** the second stage of the evaluation of a new treatment in humans. Phase II trials evaluate safety and preliminary efficacy in a larger number of participants than Phase I studies.

**PHASE III TRIAL:** the third stage of human testing of an experimental treatment. Phase III trials are designed to determine the safety and efficacy of a treatment, often by comparing it to an existing standard therapy or a placebo.

**PHASE IV TRIAL:** post-marketing studies done after a new treatment is approved and offered for sale. These trials provide additional information about safety and efficacy in large numbers of patients under "real world" conditions.

**PHLEBOTOMY:** withdrawal of blood from a vein.

**PHOTOSENSITIVITY:** an increased sensitivity to light, which may lead to easy sunburning and other adverse effects.

**PHYLLANTHUS:** tropical plant species that traditionally have been used to treat liver conditions.

**PIGMENT:** a substance responsible for the color of bodily tissues.

**PLACEBO:** an inert, inactive agent (e.g., pill, injection) that has no treatment value.

**PLACEBO ARM:** the group of participants in a clinical trial that receives an inactive substance (placebo).

**PLACEBO-CONTROLLED TRIAL:** a clinical trial in which a group receiving an inactive substance or mock therapy (placebo) is compared to a group receiving the experimental treatment.

**PLACEBO EFFECT:** a change in symptoms or disease progression associated with the treatment process itself, rather than the actual therapeutic value of a treatment.

**PLACENTA:** the organ that connects the fetus and the mother's uterus and enables the exchange of oxygen, nutrients, and waste products.

**PLASMA:** the fluid, non-cellular portion of circulating blood. See also serum.

**PLASMAPHERESIS:** a procedure in which certain components are removed from the blood plasma.

**PLATELET:** see thrombocyte.

**PLATELET COUNT:** The number of platelets in the blood. People with advanced liver disease may have reduced platelet counts, resulting in easy bleeding. A normal platelet count is 130,000-400,000/mcL.

**PNEUMONITIS:** lung inflammation.

**PO:** taken by mouth.

**POLYMERASE CHAIN REACTION (PCR):** a highly sensitive test that uses an amplification technique to detect small amounts of genetic material (DNA or RNA) in a blood or tissue sample.

**POLYMERASE INHIBITOR:** an agent that inhibits viral replication by interfering with the polymerase enzyme.

**PORPHYRIA CUTANEA TARDA:** a condition in which porphyrins build up in the body leading to symptoms including increased photosensitivity, skin damage, and discoloration.

**PORPHYRIN:** a metabolic byproduct of hemoglobin production.

**PORTAL HYPERTENSION:** high blood pressure in the portal vein that carries blood to the liver, caused by the development of fibrous scar tissue (cirrhosis) in the liver.

**PORTAL SYSTEM:** a series of veins from the small and large intestines, stomach, and spleen that join into the portal vein and are carried into the liver.

**PORTAL VEIN:** the blood vessel that carries oxygen-poor blood from the intestines to the liver for filtering.

**POSTEXPOSURE PREVENTION (POSTEXPOSURE PROPHYLAXIS, PEP):** treatment given immediately following exposure to an infectious organism in an attempt to prevent the infection from taking hold in the body.

**POST-MARKETING STUDY:** see Phase IV trial.

**POSTNATAL (POSTPARTUM):** the period following birth.

**POTASSIUM:** an element and electrolyte responsible for the body's growth and maintenance.

**POWER:** a statistical term used to describe the ability of a clinical trial to detect a particular result. Generally the power of a study increases as more participants are included or as the trial continues for a longer period of time.

**PRANA:** in Ayurveda, the body's vital energy.

**PRECLINICAL RESEARCH:** laboratory and animal studies on an experimental treatment prior to clinical trials in humans.

**PRENATAL:** the period preceding birth, during which the fetus develops in the uterus.

**PREVALENCE (ALSO PREVALENCE RATE):** the number of individuals with a condition in a specific population. The prevalence rate is determined by dividing the number of people with the condition by the total population. Contrast with incidence.

**PRIMARY CARE PHYSICIAN:** a physician who is responsible for the overall long term health maintenance of a patient.

**PRINCIPLE INVESTIGATOR:** the chief researcher conducting a clinical trial.

**PRIOR PARTIAL-RESPONDER:** a person who has a 2 log<sub>10</sub> drop in HCV RNA by treatment week 12, but who does not become HCV RNA negative by end of treatment. (*Example 2 log<sub>10</sub> drop: 1,000,000 to ≤ 10,000*)

**PROCRIT:** see erythropoietin.

**PRODRUG:** a compound that is converted to an active drug within the body.

**PROGESTERONE:** a female hormone with anti-estrogen effects. Progesterone prepares the uterus for the development of the fertilized ovum and maintains the uterus throughout pregnancy.

**PROGNOSIS (ADJECTIVE PROGNOSTIC):** a forecast of the probable course or outcome of a disease.

**PROGRESSION:** development of a disease over time.

**PROKINE:** see granulocyte colony-stimulating factor.

**PROPHYLAXIS:** a measure taken to prevent a disease or condition.

**PROSPECTIVE STUDY:** a clinical trial in which participants are selected and their progression is followed over time. Contrast with retrospective study.

**PROTEASE INHIBITOR:** an agent that inhibits viral replication by interfering with the virus' protease enzyme.

**PROTEIN:** a complex organic compound consisting of a sequence of amino acids folded in a specific configuration. Proteins are major components of living cells and are essential for bodily growth and repair.

**PROTHROMBIN:** a protein synthesized by the liver that is necessary for proper blood clotting.

**PROTHROMBIN TIME (PT):** a measure of blood clotting time. People with advanced liver disease may have a slower than normal PT. A normal PT is 10-12 seconds.

**PROTOCOL:** a written plan for a clinical trial, which typically includes details such as the hypothesis to be tested, who can participate, length of the trial, how the treatment under study will be administered, endpoints, and potential risks and benefits.

**PRURITUS (ADJECTIVE PRURITIC):** itchiness.

**PSORIASIS:** a skin condition characterized by scaling and red patches, due to the overproduction of skin cells.

**PSORIATIC ARTHRITIS:** a form of rheumatoid arthritis associated with psoriasis.

**PSYCHOSIS:** a serious mental illness.

**PSYCHOSOCIAL:** a term used to refer to factors that affect the psychological or social realm. Psychosocial factors (e.g., socioeconomic status, education, family situation) can have an important effect on disease risk and progression and are an essential aspect of a person's well-being.

**PSYCHOTHERAPY:** treatment of mental problems with non-medical therapies, in particular counseling.

**PSYCHOTROPIC:** a drug that affects psychological or mental functioning or behavior.

**PULMONARY FIBROSIS:** the development of fibrous tissue in the lungs.

**PT:** patient.

**PURPURA:** see thrombocytopenic purpura.

**PURULENT:** characterized by the accumulation of pus.

**PUS:** a thick, greenish-yellow fluid composed of dead white blood cells, killed microorganisms, and other cellular debris.

**P-VALUE:** a measure of probability that is reported with clinical trial results. The p-value indicates the likelihood the result obtained are due to chance alone. Traditionally, a p-value of less than .05 is considered statistically significant, or not likely due to chance alone. See also confidence interval.

**PYRROLIZIDINE ALKALOID:** a hepatotoxic component found in plants of the Crotalaria, Senecio, and Heliotropium families.

## Q



**Q:** medical abbreviation for every, often used to specify drug dosing schedules (e.g., q6h means every 6 hours).

**QI (CHI):** the vital energy believed to be responsible for health and disease in traditional Chinese medicine.

**QIGONG:** a form of traditional Chinese exercise that promotes the healthy flow of qi.

**QUALITY OF LIFE STUDY (QOL):** a clinical trial that measures how a condition affects the daily life of a person with a chronic illness. A clinical trial of an investigational medication may have a quality of life component to find out the effects of the study drug on QOL and if successful treatment improves QOL.

**QUALITATIVE:** relating to, or expressed in terms of, quality. A qualitative viral load test measures the presence of a virus.

**QUANTITATIVE:** relating to, or expressed in terms of, quantity. A quantitative viral load test measures the amount of viral genetic material.

**QUASISPECIES:** individual genetic variants of HCV. Within a single genotype there may be multiple quasispecies.

## R

**RA:** see rheumatoid arthritis.

**RADIATION THERAPY (RADIOTHERAPY):** the use of radiation to treat disease (especially cancer).

**RADIOGRAPHY:** the use of X-ray pictures, for example for diagnosis.

**RADIOLOGIST:** a physician who uses x-rays or other imaging procedures for diagnosis and treatment.

**RANDOMIZED TRIAL:** a clinical trial arranged to produce a chance distribution of participants into different arms (e.g., experimental treatment, standard treatment, or placebo). Clinical trial participants are usually randomized by computer to prevent potential bias of investigators. Randomization is done to minimize bias.

**RAPID VIROLOGICAL RESPONSE (RVR):** HCV RNA negative at treatment week 4.

**RAYNAUD'S PHENOMENON:** temporary interruption of blood flow to the extremities (fingers, toes, tip of nose and ears), often associated with exposure to cold temperatures.

**RBC:** red blood cell. See erythrocyte.

**RBV:** see ribavirin.

**REACTIVATION:** the return of a previously latent (inactive) infection to an active, pathogenic state.

**REACTIVE ARTHRITIS (REITER'S SYNDROME):** an arthritic disorder, often linked to conjunctivitis, that appears to be associated with viral infections.

**REBETOL:** Schering's brand of ribavirin. See ribavirin.

**REBETRON:** a bundled kit for HCV treatment that packages together Intron-A brand interferon and ribavirin.

**REBOUND:** an increase in viral load following a previous decrease.

**RECEPTOR:** a specific binding site on a cell's surface or in its interior. When chemical messengers or drugs bind to receptors, various cellular functions are activated or inhibited. Viruses must bind receptors in order to enter cells.

**RECOMBINANT:** produced by genetic engineering.

**RECONSTITUTION:** mixing a substance (e.g., Peg-Intron brand pegylated interferon) with water to return it to a usable form.

**RECURRENT:** returning or occurring repeatedly.

**RED BLOOD CELL:** see erythrocyte.

**RECRUITMENT:** the period of time assigned to identify and enroll in a clinical trial.

**REFLEXOLOGY:** an alternative healing technique that involves putting pressure on various zones of the body.

**REFRACTORY:** resistant to treatment.

**REGENERATION:** regrowth.

**REGIMEN:** a specific treatment protocol, including what drugs are taken and at what dosages.

**REIKI:** a healing technique in which energy is channeled through the hands of the healer.

**REITER'S SYNDROME:** see reactive arthritis.

**RELAPSE:** recurrence of disease symptoms following a period of improvement. In HCV, relapse can refer to an increase in viral load after it has been suppressed.

**RELAPSER:** a person who becomes HCV RNA negative at end of treatment, but becomes HCV detectable within 24 weeks from the end of treatment (EOT).

**RENAL:** having to do with the kidneys.

**REPLICATION:** multiplication or reproduction, specifically used when referring to a virus.

**RESECTION:** see hepatic resection.

**RESISTANCE:** the mutation of a microorganism in such a way that it loses its sensitivity to a drug; a resistant organism can function and replicate despite the drug's presence.

**RESISTANCE-ASSOCIATED VARIANTS (RAVS):** hepatitis C mutations that form resistant strains that occur naturally, during treatment breakthrough or after treatment relapse.

**RESOLVE:** when referring to a condition, to clear up or heal.

**RESPONDER-RELAPSER:** a person who initially responds well to a treatment, but then experiences a relapse. In chronic HCV infection, this refers to a person who initially has a positive response to treatment (e.g., normal ALT, undetectable HCV RNA), but does not sustain this response once treatment is stopped.

**RESPONSE-GUIDED TREATMENT:** Response-guided therapy uses HCV RNA testing during treatment to predict response and guide treatment duration for patients with chronic hepatitis C.

**RESPONSE TO TREATMENT:** see treatment response.

**RETINOPATHY:** disease of the retina of the eye.

**RETROSPECTIVE STUDY:** a study based on medical records, looking backward in time at events that happened in the past. Contrast with prospective study.

**RETROVIRUS:** a class of viruses that have their genetic material in the form of RNA and use the reverse transcriptase enzyme to transcribe their RNA into DNA within the host cell.

**RHEUMATOID ARTHRITIS(RA):** an autoimmune condition characterized by joint inflammation and destruction of connective tissue; other organs, including the heart, lungs, kidneys, and skin, may also be affected.

**RHEUMATOID FACTOR:** a type of antibody (IgM) that reacts to abnormal IgG antibodies produced by people with autoimmune conditions such as rheumatoid arthritis.

**RHEUMATOLOGY:** the study and treatment of conditions of the joints, muscles, bones, and connective tissues.

**RIBASPHERE:** Kadmon Pharmaceutical's brand of generic ribavirin; see ribavirin.

**RIBAVIRIN (RBV)**—brand name REBETOL, COPEGUS, RIBASPHERE, MODERIBA: an antiviral medication approved for use in combination with other hepatitis drugs to treat chronic HCV infection.

**RIBONUCLEIC ACID (RNA):** a single-stranded nucleic acid that encodes genetic information. The presence of viral RNA in the blood indicates that a virus is actively replicating. Hepatitis C and HIV are examples of RNA viruses.

**RNA** is made up of sequences of four building blocks: adenine, cytosine, guanine, and uracil. The presence of viral RNA in the blood indicates that a virus is actively replicating.

**RIBOSOME:** small organelles in the cell where new proteins are built from the RNA "blueprint."

**RIBOZYME:** an RNA molecule that cleaves (cuts) RNA strands at a specific site. A ribozyme directed against a specific region of the HCV genome is currently under study as a treatment for HCV.

**RISK/BENEFIT RATIO:** a measurement used to evaluate whether potential benefits outweigh potential risks (e.g., in a clinical trial).

**RITONAVIR:** a protease inhibitor that is used to boost certain HCV medications such as VIEKIRA PAK and TECHNIVIE.

**RNA:** see ribonucleic acid.

**ROFERON-A:** brand name of interferon-alpha-2a.

**RX:** treatment.

## S

**SAFER SEX:** sexual activities that reduce or eliminate the spread of sexually transmitted diseases, typically by blocking contact with semen and/or vaginal fluid.

**SALVAGE THERAPY:** emergency treatment with experimental drugs for an illness that does not respond to standard therapy.

**SAMPLE SIZE:** the number of participants in a clinical trial.

**SARCOIDOSIS:** an autoimmune condition characterized by granulomas (small nodules of cells); the condition may affect the lungs, skin, eyes, liver, and other organs.

**SARGRAMOSTIM:** see granulocyte colony-stimulating factor.

**SCLERODERMA:** an autoimmune condition characterized by hardened skin and connective tissue.

**SEIZURE:** a burst of abnormal electrical activity in the brain.

**SELECTIVE SEROTONIN REUPTAKE INHIBITOR (SSRI):** a psychotropic drug (e.g., Prozac, Zoloft) used to relieve depression; SSRI drugs act by moderating levels of the neurotransmitter serotonin.

**SEMEN:** male ejaculatory fluid containing sperm and various proteins.

**SENSITIVITY:** the ability of an organism to respond to a drug or other agent. Sensitivity also refers to a statistical measure of the accuracy of a screening test, that is, how likely a test is to label as positive those who have a disease or condition. Contrast with specificity.

**SEPSIS:** infection.

**SEROCONVERSION:** the development of antibodies against a pathogen; the change in a person's antibody status from negative to positive.

**SERONEGATIVE:** lack of antibodies against a pathogen in the blood.

**SEROPOSITIVE:** presence of antibodies against a pathogen in the blood.

**SEROSTATUS:** the presence or absence of antibodies against a pathogen in the blood.

**SERUM:** the fluid, noncellular portion of blood that remains after coagulation; lymphatic fluid. See also plasma.

**SERUM HEPATITIS:** see hepatitis B.

**SEXUALLY TRANSMITTED DISEASE (STD, SEXUALLY TRANSMITTED INFECTION, STI, VENEREAL DISEASE):** a disease (e.g., chlamydia, gonorrhea, syphilis, herpes, HIV) that is transmitted through sexual contact.

**SGOT:** serum oxaloacetic transaminase. See aspartate aminotransferase.

**SGPT:** serum glutamic pyruvic transaminase. See alanine aminotransferase.

**SHEDDING:** release of infectious particles (e.g., bacteria, viruses) into the environment.

**SIALADENITIS:** Sialadenitis is an inflammatory disease that causes dry mouth and eyes and is associated with hepatitis C infection. Sialadenitis destroys the salivary glands.

**SIDE EFFECT:** see adverse reaction.

**SIMEPREVIR(BRAND NAME OLYSIO):** is used to treat chronic hepatitis C.

**SINUSOIDS:** cavities through hepatic or liver tissue allowing exchange of nutrients and other substances between blood and hepatocytes (liver cells).

**SJÖGREN'S SYNDROME:** an autoimmune disorder in which the immune system attacks fluid-producing exocrine glands, leading to dry eyes, mouth, vagina, etc.

**SOC:** see standard of care.

**SODIUM:** an element and electrolyte and a component of salt that helps to regulate cell fluid balance.

**SOFOSBUVIR:** (brand names HARVONI: SOVALDI) is used to treat chronic hepatitis C.

**SOVALDI:** see sofosbuvir.

**SQ:** see subcutaneous.

**SPECIFICITY:** a statistical measure of the accuracy of a screening test. Specificity measures the proportion of negatives which are correctly identified (e.g., the percentage of healthy people who are correctly identified as not having the condition). Contrast with sensitivity.

**SPIDER ANGIOMA:** a mass of visible veins on the skin surface; may be a symptom of chronic liver damage.

**SPLEEN:** an immune system organ located in the abdominal cavity. The spleen produces blood cell in the fetus, and later removes old red blood cells and platelets from circulation.

**SPLENOMEGALY:** enlargement of the spleen.

**SPONTANEOUS BACTERIAL PERITONTIS:** bacterial infection of ascitic fluid in the abdominal cavity.

**SSRI:** see selective serotonin reuptake inhibitor.

**STAGE I: THE** earliest stage of liver damage, characterized by liver inflammation without fibrosis or cirrhosis.

**STAGE II:** a stage of liver damage characterized by fibrosis in a single area of the liver.

**STAGE III:** A stage of liver damage characterized by fibrosis in adjacent areas of the liver.

**STAGE IV:** the most advanced stage of liver damage, characterized by cirrhosis and loss of normal liver architecture.

**STANDARD INTERFERON:** the type of interferon-alpha traditionally used to treat HCV. Brand names include Intron-A and Roferon-A. Also see pegylated interferon.

**STANDARD OF CARE:** THE level of care that all persons with a particular illness should receive; the level below which care would be considered substandard.

**STANDARD THERAPY:** the best or most widely used currently available treatment for a disease.

**STATISTICAL SIGNIFICANCE:** the probability that a clinical trial result is not due to chance alone. In general, a result of a clinical trial is considered statistically significant if there is a less than 5% probability that the difference observed would occur by chance alone if the treatments being compared were equally effective.

**STI:** see sexually transmitted disease.

**STD:** see sexually transmitted disease.

**STEATOSIS:** buildup of fat tissue in the liver.

**STENOSIS:** narrowing or tightening of an opening or passage in the body.

**STEROID:** a family of substances that share a similar chemical structure, including certain hormones (e. g., testosterone) and various drugs.

**STROKE (CEREBROVASCULAR ACCIDENT):** interruption of the normal flow of blood to the brain due to a blood clot or hemorrhage. Lack of blood flow can lead to brain damage (resulting in symptoms such paralysis) and death.

**SUBCLINICAL:** disease symptoms that are too subtle to be noticed by a patient, but may be apparent in laboratory results.

**SUBCUTANEOUS (SQ):** underneath the skin; usually refers to a drug injected under the skin.

**SUBJECT:** a volunteer participant in a clinical trial.

**SUBTHERAPEUTIC:** a drug dosage that is too low to be effective.

**SUBTYPE:** a genetic variation of an organism. Subtypes are a more narrow classification than genotypes, but broader than quasispecies. Genotype 1 HCV is divided into subtypes 1a and 1b.

**SUPERINFECTION:** the acquisition of a second infection while a previous infection is still present.

**SUPEROXIDE DISMUTASE:** an enzyme that destroys free radicals.

**SUPPLEMENT:** a nutrient, usually in pill form, taken in addition to the normal diet.

**SUPPORT GROUP:** a group of peers with a common condition that meet for mutual emotional support or education.

**SURROGATE MARKER:** see endpoint.

**SUSCEPTIBLE:** vulnerable to or potentially able to contract a disease. Also refers to a microorganism that is vulnerable or sensitive to the effects of a drug.

**SUSTAINED RESPONDER:** a person who maintains a long-term response to treatment. In HCV, a sustained responder has a long-term response (e.g., normal ALT levels, undetectable HCV RNA) that persists after treatment is stopped.

**SUSTAINED VIROLOGICAL RESPONSE (SVR):** HCV RNA is undetectable at Week 24 post-treatment. Considered a viral cure.

**SVR:** see sustained virological response:

**SVR12:** no virus detected at 12 weeks after completion of treatment. Considered a viral cure.

**SVR24:** no virus detected at 24 weeks after completion of treatment. Considered a viral cure.

**SX:** see symptoms.

**SYMPTOM (SX):** any perceptible change in the anatomy or function of the body that indicates the presence of a disease or condition.

**SYMPTOMATIC:** showing outward signs or symptoms of a disease.

**SYNDROME:** a set of symptoms or disease manifestations that occur together.

**SYNERGY (SYNERGISM, ADJECTIVE SYNERGISTIC):** an interaction between drugs that produces an effect greater than the expected additive effect of the different drugs used separately.

**SYNERGISTIC EFFECT:** The interaction of two or more drugs such that their combined effect is greater than the sum of the individual effects when each drug is administered alone.

**SYSTEMIC:** affecting the whole body.

**SYSTEMIC EXERTION INTOLERANCE DISEASE (CHRONIC FATIGUE SYNDROME, CHRONIC FATIGUE IMMUNE DYSFUNCTION SYNDROME, CFIDS):** an illness characterized by prolonged fatigue, neurological problems, joint and muscle pain, and/or impairment of the ability to function normally for six months or longer.



**SYSTEMIC LUPUS ERYTHEMATOSUS (LUPUS):** an autoimmune disease characterized by inflammation of connective tissue throughout the body, especially in the joints.

**SYNTHESIS:** production.

## T

**TACE:** see transcatheter arterial chemoembolization.

**T'AI CHI:** a traditional Chinese exercise that promotes the health flow of qi.

**TAURINE:** an amino acid synthesized by the liver that is necessary for many bodily functions.

**T-CELL (T-LYMPHOCYTE):** a type of immune system white blood cell.

**TECHNIVIE:** a combination of ombitasvir, paritaprevir and ritonavir plus ribavirin to treat hepatitis C.

**TELAPREVIR:** (brand name Incivek): an HCV protease inhibitor (taken in combination with pegylated interferon plus ribavirin). It is no longer used to treat hepatitis C.

**TELBIVUDINE (BRAND NAME TYZEKA):** A nucleoside analogue medicine used to treat chronic hepatitis B.. Telbivudine is not recommended as first line of HBV treatment because of the high rate of drug resistance.

**TENOFOVIR (BRAND NAME VIREAD):** a nucleoside analogue medicine used to treat chronic hepatitis B and HIV .Tenofovir has a low drug resistance profile so it is recommended as a first line of treatment.

**TERATOGENICITY:** causing birth defects or malformation of the fetus.

**TERMINATED:** a study that has been stopped or discontinued before completion.

**TESTOSTERONE:** the primary male sex hormone or a synthetic analog. Testosterone stimulates the development of male secondary sex characteristics and the production of sperm.

**THIOCTIC ACID:** see alpha lipoic acid.

**THISYLIN:** an active component of milk thistle.

**THROMBOCYTE (PLATELET):** a type of blood cell responsible for normal blood clotting.

**THROMBOCYTOPENIA:** an abnormally low number of platelets, which may result in abnormal bleeding and easy bruising.

**THROMBOCYTOPENIC PURPURA:** a condition caused by a lack of platelets. Small blood vessels under the skin bleed, resulting in purplish discolorations.

**THROMBOPOIETIN(TPO):** a cytokine that stimulates the production of platelets.

**THROMBOSIS:** development of blood clots within blood vessels or the heart.

**THYMIC FACTOR:** a hormone produced by the thymus gland or a synthetic substance that has a similar effect. Thymic factors help promote immune system activity, and are under study as a treatment for HCV. Factors include thymosin, thymopentin, and thymopoietin.

**THYMOPOIETIN:** see thymic factor.

**THYMOPENTIN:** see thymic factor.

**THYMUS GLAND:** a gland in the chest that plays an important role in immune system function; the gland is active in children, but less so in adults.

**THYROID GLAND:** an organ at base of the neck that produces thyroxin and other hormones involved in regulating metabolism.

**THYROIDITIS:** inflammation of the thyroid gland.

**TID:** taken three times daily.

**TINNITUS:** ringing or buzzing in the ears.

**TMA:** see transcripion mediated amplification.

**TOCOPHERAL:** see vitamin E.

**TOLERABILITY:** the degree to which a drug or other agent produces adverse side effects.

**TOPICAL:** a medication applied to the skin surface.

**TOXICITY(ADJECTIVE TOXIC):** the quality of being poisonous or harmful; often used to refer to drug side effects.

**TOXIN:** a harmful or poisonous agent.

**TRACE ELEMENT:** a substance needed in very small amounts for the proper functioning of the body.

**TRADITIONAL CHINESE MEDICINE (TCM):** an ancient Asian system of healing that focuses on achieving internal balance. TCM practitioners use methods such as acupuncture,

moxibustion, herbal formulas, and exercises such as t'ai chi and qigong to restore the flow of qi (vital energy) within the body.

**TRANSAMINASE:** see aminotransferase.

**TRASCATHETER ARTERIAL CHEMOEMBOLIZATION(TACE):** a treatment for hepatocellular carcinoma that involves the injection of chemotherapeutic drugs into the tumor's blood supply.

**TRANSCRIPTION (VERB TRANSCRIBE):** the process of copying genetic material.

**TRANSCRIPTON MEDIATED AMPLIFICATION (TMA):** a recently developed, highly sensitive viral load test.

**TRANSFUSION:** the transfer of blood or blood components from one individual to another (or back to the donor, in the case of autologous transfusion).

**TRANSIENT:** short-lived; not permanent.

**TRANSJUGULAR LIVER BIOPSY:** a type of liver biopsy in which a sample is taken through the jugular vein in the neck.

**TRANSMISSION:** spread of a pathogenic organism from one person to another.

**TRANSPLANT:** surgical transfer of an organ from one person to another.

**TRANSIENT ELASTOGRAPHY:** see FIBROSCAN

**TREATMENT-EXPERIENCED:** a person who has had prior treatment for a particular condition.

**TREATMENT-NAIVE:** a person who has never been treated.

**TREATMENT RESPONSE:** a favorable outcome from therapy. Several different measures are used to describe HCV treatment response, including biochemical response, histological response, end-of-treatment response, and sustained virological response.

**TRIAL:** see clinical trial.

**TRIGLYCERIDE:** an organic compound made up of a fatty acid plus glycerol.

**TROUGH LEVEL:** the lowest level of a drug reached between doses. Contrast with peak level.

**TSH:** thyroid stimulating hormone.

**T-SUPPRESSOR CELL:** a type of T-cell that helps to regulate and control immune system activity.

**TUMOR:** an abnormal growth of cells. Tumors may be malignant (cancerous) or benign (harmless).

**TWINRIX:** brand name of a combination hepatitis A/hepatitis B vaccine.

**TX:** treatment, transplant.

**TYPE 1 DIABETES:** see diabetes mellitus.

**TYPE 2 DIABETES:** see diabetes mellitus.

## U

**ULTRA-RAPID VIROLOGICAL RESPONSE (URVR):** undetectable HCV RNA at Week 2 of treatment.

**ULTRASONOGRAPHY (ULTRASOUND):** a method of visualizing the internal parts of the body, or a fetus within the uterus, using sound waves.

**UNBLINDED:** see blinding.

**UNCONTROLLED TRIAL:** a clinical trial in which all participants receive the experimental treatment and none receive a standard treatment or placebo for comparison.

**UNDETECTABLE (UNQUANTIFIABLE):** a term used to describe a viral load (amount of viral RNA) that is below the level of detection of the test being used.

**UNIVARIATE ANALYSIS:** a statistical analysis that takes into account a single factor or variable.

**UNIVERSAL PRECAUTIONS:** techniques used by health-care providers (e.g., use of gloves and face masks, proper disposal of used syringes) to prevent the spread of infectious diseases.

**UNOS (UNITED NETWORK OF ORGAN SHARING):** a non-profit organization that runs the Organ Procurement and Transplant Network which oversees the fair distribution of organs for transplantation.

## V

**VACCINE:** a preparation administered to stimulate an immune response to protect a person from illness. A vaccine typically includes a small amount of a killed or inactivated microorganism, or genetically engineered pieces. A therapeutic (treatment) vaccine is given after

infection and is intended to reduce or stop disease progression. A preventive (prophylactic) vaccine is intended to prevent initial infection.

**VARICEAL HEMORRHAGE:** bleeding from stretched and weakened blood vessels, especially in the esophagus or stomach.

**VARICES (ADJECTIVE VARICEAL):** an abnormally dilated or swollen vein, artery, or lymph vessel resulting from portal hypertension.

**VASCULITIS:** blood vessel inflammation.

**VEIN:** Any of the membranous tubes that form a branching system and carry blood to the heart from other organs.

**VERTICAL TRANSMISSION (PERINATAL TRANSMISSION):** transmission from a mother to a fetus or newborn. Vertical transmission may occur in utero (in the womb), intrapartum (during birth), or postpartum (e.g., via breast-feeding).

**VICTRELIS (BRAND NAME BOCEPREVIR):** an HCV protease inhibitor taken in combination with pegylated interferon plus ribavirin. It is no longer used to treat hepatitis C.

**VIEKIRA PAK:** a combination of ombitasvir, paritaprevir/rionair, dasabuvir with and without ribavirin to treat hepatitis C.

**VIRAL CURE:** see sustained virological response.

**VIRAL HEPATITIS:** a type of hepatitis caused by a virus. The most common types are hepatitis A, hepatitis B, and hepatitis C.

**VIRAL LOAD:** the amount of virus in the blood or other tissues, usually expressed in terms of copies of viral genetic material (RNA or DNA). The presence of genetic material indicates that a virus is actively replicating.

**VIRAL LOAD TEST:** an assay that measures viral load; the bDNA, PCR, and TMA tests are most often used to determine HCV viral load.

**VIRAL RESPONSE:** see virological response.

**VIREMIA (ADJECTIVE VIREMIC):** the presence of a virus in the blood.

**VIRION:** a complete virus particle.

**VIROLOGICAL FAILURE:** failure of a treatment to suppress a virus.

**VIROLOGICAL RESPONSE:** reduction in viral replication in response to treatment. In HCV, a complete virological response means that a person's HCV RNA becomes undetectable with treatment.

**VIROLOGY:** the study of viruses and diseases caused by viruses.

**VIRULENCE (ADJECTIVE VIRULENT):** aggressiveness, ability to cause disease.

**VIRUS:** a microscopic infectious organism that is unable to grow or replicate outside of a host cell. Viruses integrate their genetic material (DNA or RNA) into a host cell and take over the cell's biological mechanisms to reproduce new virus particles.

**VITAMIN:** an organic substance that acts as a coenzyme or regulator of metabolic processes; vitamins are crucial for many vital bodily functions.

**VITAMIN A:** a fat-soluble vitamin synthesized from beta carotene within the body that has antioxidant properties and is important for proper immune system functioning. Excess vitamin A can be toxic to the liver.

**VITAMIN B:** a complex of several important vitamins including B1 (thiamin), B2 (riboflavin), B3 (niacin), B6 (pyridoxine), and B12 (cobalamin).

**VITAMIN B12 (COBALAMIN):** a vitamin needed for red blood cell production and DNA synthesis and repair. Vitamin B12 deficiency may result in anemia, neurological dysfunction, and changes in mental status.

**VITAMIN C (ASCORBIC ACID):** an antioxidant vitamin that protects cells from oxidative damage. Vitamin C deficiency may result in poor healing, easy bruising and anemia.

**VITAMIN D:** a fat-soluble vitamin that is important for mineral metabolism and which may play a role in immune function. Excess vitamin D can be toxic to the liver.

**VITAMIN E (TOCOPHEROL):** an antioxidant vitamin that protects cell membranes from oxidative damage.

**VITAMIN K:** a substance important for blood clotting.

**VITAMIN P:** see bioflavonoid.

**VITILIGO:** a condition in which there is loss of pigmentation – usually around the mouth, eyes, nose, elbows, knees and wrists.

## W

**WASHOUT PERIOD:** the time it takes for a drug to be cleared from the body after it is discontinued.

**WASTING SYNDROME:** a condition characterized by atrophy of lean body mass and involuntary weight loss.

**WATER-SOLUBLE:** capable of being dissolved in water. Contrast with fat-soluble.

**WBC:** white blood cell. See leukocyte.

**WELLFERON:** brand name of lymphoblastoid interferon-alpha-n1.

**WESTERN BLOT:** an antibody test used to confirm a positive ELISA test for HIV.

**WESTERN MEDICINE:** allopathic medicine; the type of medical practice.

**WHITE BLOOD CELL (WBC):** see leukocyte.

**WILSON'S DISEASE:** a hereditary disorder affecting copper metabolism.

**WINDOW PERIOD:** the time between exposure to a microorganism and the production of sufficient antibodies to be detected on a test.

**WNL:** within normal limits.

## X

**XENOGRAFT (XENOTRANSPLANT):** a transplant of an organ or tissue from a different species.

## Y

(no definitions are posted at this time)

## Z

**ZEPATIER:** a combination of elbasvir and grazoprevir combined into one pill taken once-a-day to treat hepatitis C.