



INTEGRATED BIOMARKERS

Glossary

(in process)

By Fondazione Giovanni Lorenzini (Milan, Italy, and Houston, TX, USA)

| Definition | Description | References |
|----------------------|---|--|
| 2DGE | 2-Dimensional Gel Electrophoresis is a technique for separating complex mixtures of proteins. The separation starts in one dimension and then there is separation at 90°. The substrate can be agarose or polyacrilamide: two-dimensional polyacrylamide gel electrophoresis (2D-PAGE) | |
| 6-keto-prostaglandin | A metabolite of prostacycline | <i>Prostaglandins</i> 1980;20(1):105–110 |
| 8-epiPGF | 8-epi-Prostaglandin F2alpha | <i>Prostaglandins</i> 1980;20(1):105–110 |
| 8-OHdG | 8-hydroxy-2 deoxyguanosine: an oxidized DNA base common in cells undergoing oxidative stress | <i>Mol Carc</i> 2001;31(4):214-23 |
| AA | Aortic Aneurysm | |
| A-ANT | Amino Acid–Nucleotide Interaction Database categorizes all amino acid–nucleotide interactions from experimentally determined protein–nucleic acid structures, and provides users with a graphic interface for visualizing these interactions in aggregate | <i>Nuc Acids Res</i> 2004;32, Database issue D174-D181 |
| ABI | Ankle Brachial Index as a prediction of the extent of coronary atherosclerosis and cardiovascular events in patients with coronary artery disease | |
| AC | Anticoagulation | <i>Neurology</i> 2001;56:624-627 |
| ACA | Anterior Cerebral Artery | |
| ACAPS | Asymptomatic Carotid Artery Plaque Study | <i>Contr Clin Trials</i> 1992;13(4):293-314 |
| ACB | Albumin Cobalt Binding | <i>Clin Chem</i> 2003;49:581-5 |
| ACC | American College of Cardiology | |
| Accuracy | A measure of closeness of agreement between a test result and an accepted reference value. The degree of conformity of an indicated value to an accepted standard value, or ideal value. Links Accuracy Rating - A number of quantities defining a limit that errors will not exceed when a device is used under specified operating conditions. Accuracy rating can be expressed in a number of forms, i.e. in terms of the measured variable ($\pm 1^\circ\text{C}$), percent of span ($\pm 0.5\%$ of span), percent of upper range value ($\pm 0.5\%$ of upper range value F.S.), percent of scale length ($\pm 0.5\%$ of scale length), or percent of actual output reading ($\pm 1\%$ of actual output reading). Measured Accuracy - The maximum positive and negative deviation observed in testing a device under specified conditions and by a specified procedure. It is usually measured as an inaccuracy and expressed as accuracy, typically in terms of the measured variable, percent of span, percent of upper range variable, percent of scale length, or percent of actual output reading. See accuracy rating | |
| ACE Inhibitors | ACE (angiotensin-converting enzyme) inhibitor - A medicine that lowers blood pressure by interfering with the breakdown of a protein-like substance involved in blood pressure regulation | <i>FDA Public Health Advisory</i> |
| ACS | Acute Coronary Syndrome: summarizes the life threatening phases of coronary artery disease like unstable angina, acute myocardial infarction and sudden cardiac death | |
| Actuarial Analysis | The application of probability and statistical methods to calculate the risk of occurrence of any event, such as onset of illness, recurrent disease, hospitalization, disability, or death. It may include calculation of the anticipated money costs of such events and of the premiums necessary to provide for payment of such costs | |
| Acute Chest Pain | It is the most common symptom of acute myocardial infarction and it is often described as tightness, pressure, or squeezing | |

| Definition | Description | References |
|-----------------------|--|---|
| Acute-phase Proteins | Any protein whose plasma concentration increases (or decreases) by 25% or more during certain inflammatory disorders. The acute-phase proteins include C-reactive protein (CRP), Serum Amyloid A (SAA), Fibrinogen, and alpha 1-acid glycoprotein | |
| Acute-phase Reactants | Synonym of Acute-phase Proteins | |
| AD | Alzheimer Disease | |
| ADC | Apparent Diffusion Coefficient is referred to the net diffusion of the water molecules measured from a tissue in MRI | <i>Radiology 1986;161:401-7</i> |
| ADH | Antidiuretic Hormone. See also Arginin Vasopressin - AVP | |
| Adiponectin | Protein hormone produced and secreted exclusively by adipocytes (fat cells) that regulates the metabolism of lipids and glucose. Adiponectin influences the body's response to insulin. Adiponectin also has anti-inflammatory effects on the cells lining the walls of blood vessels. High blood levels of adiponectin are associated with a reduced risk of heart attack. Low levels of adiponectin are found in people who are obese (and who are at increased risk of a heart attack). It is considered as vasoprotective factor improving glucose tolerance mainly in liver | <i>Webster's New World™ Medical Dictionary 2nd Edition 2003</i> |
| ADMA | Asymmetric Di Methylarginine (ADMA) is a naturally occurring component of human blood plasma. It is formed as a metabolic byproduct of continuous protein turnover in all cells of the body | <i>Atherosclerosis 2003; s4: 1-3</i> |
| ADV | Adeno Virus | |
| Adverse Drug Event | Adverse Drug Event. Syn: Adverse Drug Error: Any incident in which the use of a medication (drug or biologic) at any dose, a medical device, or a special nutritional product (for example, dietary supplement, infant formula, medical food) may have resulted in an adverse outcome in a patient | |
| Adverse Drug Reaction | Adverse Drug Reaction – ADR. An undesirable response associated with use of a drug that either compromises therapeutic efficacy, enhances toxicity, or both | |
| Adverse Event | An untoward, undesirable, and usually unanticipated Event, such as death of a patient, an employee, or a visitor in a health care organization. Incidents such as patient falls or improper administration of medications are also considered adverse events even if there is no permanent effect on the patient | |
| AEA | Anti Endothelial Antibodies | |
| AEMC | Advanced Environmental Monitoring and Control Program | |
| AFA | Anti Filaggrine Autoantobodies | |
| Agatston's score | Method to quantify calcifications in body vessels | |
| Age | A time in life (usually defined in years) at which some particular qualification or power arises. | |
| AGT | Angiotensinogen | |
| AHF | Acute Heart Failure | |
| AIFA | Italian Drug Agency | |
| AIP | Atherogenic Index of Plasma log transformed ratio of molar concentration of TGL to HDL-C | <i>Clin Bioch 2001;34:583-8</i> |
| Albumin and Creatinin | Amount of urinary excretion of albumin indicates kidney damage and is recognized as a risk factor for progression of kidney disease and cardiovascular disease. An albumin/creatinine ratio should be reported with all urine albumin measurements. | <i>Clin Chem 2009;55:24-38</i> |

| Definition | Description | References |
|---------------------------------|---|---|
| Aldosterone | Aldosterone is a steroid hormone synthesized from cholesterol by the enzyme aldosterone synthase. It is formed in the outer-section (zona glomerulosa) of the adrenal cortex of the adrenal gland, as the cells of other sections don't have the corresponding enzyme. It is the sole endogenous member of the class of mineralocorticoids. It helps regulate the body's electrolyte balance by acting on the mineralocorticoid receptor | |
| Algorithm | An explicit step-by-step procedure for producing a solution to a given problem. Specifically, a mathematical equation typically executed using a computer program (or set of programs) that is designed to systematically solve a certain kind of problem | |
| alpha-1-GP | Alpha 1 acid glycoprotein or orosomucoid | |
| AMI | Acute Myocardial Infarction | <i>JACC 2000;36:959-69</i> |
| AMLA | Anti Myolemmal Antibodies | |
| AMORIS | <i>Apolipoprotein-related Mortality Risk</i> | <i>BI Press 1992;s4:35- 42 Circulation 2005;111:1883-1890</i> |
| ANA | Anti Nuclear Antibodies | |
| Analyte | The part of the sample that the test is designed to find or measure | |
| Analytical Imprecision | See Assay imprecision | |
| ANCA | Anti Cytoplasmatic Antibodies | |
| Aneurysm | A sac or out-pouching of the walls of an artery or vein filled with blood. Adj: Cerebral aneurysm, Aortic aneurysm, Saccular aneurysm, dissecting aneurysm | |
| Angina | Angina pectoris (chest pain): A type of pain usually described as choking, squeezing, or suffocating, usually present in the chest, throat, jaw, shoulders, arms or elbows. Most commonly associated with blockage of the heart arteries. Adj: Stable Angina, Unstable Angina | |
| Angiography | A test to determine the severity and location of blocked arteries of any part of the body, particularly the heart arteries. But it does not produce information about the composition of the atherosclerotic plaque or other histopathological features | <i>Circulation 1995;92:2333-42</i> |
| Angioscopy | Allows direct visualization of the surface on the internal wall of the artery identifying plaques, presence of thrombus, and macroscopic features: as tears, ulcerations and fissures | |
| Angiotensin II | Angiotensin II is the final active messenger of the renin-angiotensin pathway. Angiotensin II binds to AT1 receptors to cause vasoconstriction and fluid retention, both of which lead to an increase in blood pressure. The angiotensin II receptor blockers lower blood pressure by blocking the AT1 receptors | |
| Angiotensin II receptor blocker | A medicine that lowers blood pressure by blocking the action of angiotensin II | |
| ANN | Artificial Neural Networks - a tool for clinical decision: a computerized mathematical model for understanding and predicting complex and chaotic dynamics in complex biological systems. A type of artificial intelligence that attempts to imitate the way a human brain works. Rather than using a digital model, in which all computations manipulate zeros and ones, a neural network works by creating connections between processing elements, the computer equivalent of neurons. The organization and weights of the connections determine the output. Neural networks are particularly effective for predicting events when the networks have a large database of prior examples to draw on | <i>U.S. Patent 5,293,457</i> |
| Annual Mortality | Number of deaths referred to 1.000 subjects: inhabitants, gender, age, pathology, etc | |
| Anthypertensive | Any medicine or other therapy that lowers blood pressure | |

| Definition | Description | References |
|---------------------|---|--|
| A-PLUS | <i>Avasimide and Progression of Coronary Lesions Assessed by Intravascular Ultrasound</i> | <i>Am Heart J 2002;144:589-96</i> |
| APACHE | Acute Physiology and Chronic Health Evaluation, a scoring system using routinely collected data and providing an accurate, objective description for a broad range of intensive care unit admissions, measuring severity of illness in critically ill patients | |
| APE | Acute Pulmonary Embolism | |
| ApoA-I | Apolipoprotein A-I (apoA-I) is the primary protein constituent of HDL, defining its size and shape, solubilizing its lipid components, removing cholesterol from peripheral cells, activating the LCAT enzyme, and delivering the resulting cholesterol esters to the liver | |
| ApoB | Apolipoprotein B (Apo B) exists in human plasma as two isoforms, apo B-48 and apo B-100. Apo B-100 is the major physiological ligand for the LDL receptor. It is a large monomeric protein, containing 4536 amino acid residues. Apo B-100 is synthesized in the liver and is required for the assembly of very low density lipoproteins (VLDL). It does not interchange between lipoprotein particles, as do the other lipoproteins, and it is found in IDL and LDL particles after the removal of the apolipoproteins A, apolipoproteins E and apolipoproteins C. Apo B-48 is present in chylomicrons and chylomicron remnants and plays an essential role in the intestinal absorption of dietary fats. Apo B-48 is synthesized in the small intestine. Apo B is considered superior to LDL Cholesterol, and is considered better guide than any of the cholesterol indices for judging the adequacy of LDL-lowering therapy | <i>J. Int Med 2006;59:247-58</i> |
| ApoB/ApoA1 ratio | Ratio between Apolipoprotein B and Apolipoprotein A-I. The Apo B/Apo A-I ratio is considered superior to any of the cholesterol ratios for quantifying the lipoprotein-related risk of vascular disease | <i>J. Int Med 2006;59:247-58</i> |
| APP | Amyloid Precursor Protein | |
| AR | Absolute Risk | |
| ARBITER | <i>Arterial Biology for the Investigation of the Treatment Effects of Reducing Cholesterol</i> | <i>Am Heart J. 2001;141(3):342-7</i> |
| ARIC | <i>Atherosclerosis Risk in Communities</i> | <i>Circulation 2004;109:837-42</i> |
| ARR | Absolute Risk Reduction: is the difference in the event rate between control group (CER) and treated group (EER): $ARR = CER - EER$. Case-control Study involves identifying patients who have the outcome of interest (cases) and control patients without the same outcome, and looking back to see if they had the exposure of interest. | <i>Evidence Based Medicine Third Edition. Churchill Livingstone: Edinburgh, 2005</i> |
| Arterial Remodeling | Remodeling of the arteria after an injury to the intima, or media, or adventitia | |
| Arterial Stifness | Decreased compliance of the central vasculature to arterial pressure and flow dynamics | |
| Arteriosclerosis | A disease process, commonly called "hardening of the arteries", which includes a variety of conditions that cause artery walls to thicken and lose elasticity | |
| ARVC | Arrhythmogenic Right Ventricular Cardiomyopathy is characterized by a progressive replacement of normal right ventricular muscle cells by fibrous tissue and fat | <i>Circulation 1982;65:384-90</i> |
| ASA | American Society of Anesthesiologists | |
| ASA | Anti Sarcolemmal Antibodies | |
| ASAP | Atorvastatin versus Simvastatin on Atherosclerosis Progression | <i>Cerebrovascular Diseases 2003;16 (Sp3):25-32</i> |
| ASNC | American Society of Nuclear Cardiology | |
| Assay | A set of operations having the object of determining the value of quantity | |

| Definition | Description | References |
|---|--|---------------------------------------|
| Assay Analytical Factors | Under control in the diagnostic department are: internal and external monitoring, quality control, instrumentations, methods validation, procedures manual, comparison of tests results | <i>BMJ Clinical Evidence</i> |
| Assay Imprecision | Imprecision: distance of agreement between independent results of measurement obtained under stipulated conditions. Imprecision is a qualitative concept, a quantitative counterpart of imprecision. Imprecision is computed as a standard deviation or a coefficient of variation of the measurement results. Imprecision depends critically on the specified conditions. Standard deviation expressing imprecision may depend on the value of the measuring; the phenomenon is called heteroscedasticity | <i>BMJ Clinical Evidence</i> |
| Assay Interference | A systematic error in the measure of a signal caused by presence of concomitants in a sample | |
| Assay Postanalytical Factors in Medicine Laboratory | Computer entry and management of data. Quality assurance. Report generation. Integration of multitest results pertaining the single patient. Dialogue and consultancy to the ward and clinicians. Dialogue and consultancy to the patients and family. Clinical report delivery. Specimen storage method re-evaluation. Protocols re-evaluation. Guidelines re-evaluation. Personnel safety. Personnel formation and updating. Errors evaluation and prevention. Specimen Collection, Handling, and Transport to the Laboratory. Specimen Identification. Test Identification. Specimen Accessioning. Client Communication and Education. Personnel Safety. Laboratory Environment. Personnel Requirements | |
| Assay Sensitivity Specificity | See Sensitivity and Specificity | |
| <i>ASTEROID</i> | <i>A Study to Evaluate the Effect of Rosuvastatin on Intravascular Ultrasound-Derived Coronary Atheroma</i> | <i>Atheroscler Suppl 2003;4(2):27</i> |
| Atherosclerosis | A disease process that leads to the buildup of a waxy substance, called plaque, inside blood vessels. Links: Atherosclerosis Progression, Atherosclerosis Instability. Atherogenesis | |
| Atria | The two upper or holding chambers of the heart (together referred to as atria) | |
| Atrial pressure | L: left, R: right atrial pressure | |
| Atrial fibrillation | A type of cardiac arrhythmia during which the atria (i.e. the top chambers of the heart) beat in an uncoordinated and disorganized fashion thus leading to a very irregular and fast rhythm | |
| AUC | Area Under Curve - A statistical means of summarizing information from a series of measurements on one individual. It is frequently used in clinical pharmacology where the AUC from serum levels can be interpreted as the total uptake of whatever has been administered. As a plot of the concentration of a drug against time, after a single dose of medicine, producing a standard shape curve, it is a means of comparing the bioavailability of the same drug made by different companies | |
| AUCIns OGTT | AUC for insulin after Oral Glucose Tolerance Test | |
| AUCIns OLTT | AUC for insulin after Oral Lipid Tolerance Test | |
| Aura | A simple partial seizure occurring within seconds or minutes before a complex partial or secondarily generalized tonic-clonic seizure | |
| AVP | Arginin Vasopressin, also named Antidiuretic Hormone, a key regulator of water balance | |
| AVP | Arginine vasopressin. see Vasopressin | |
| BART | Brachial Artery Reactivity Testing: non invasive test using ultrasound waves; a widely accepted method of evaluating blood vessel function | |

| Definition | Description | References |
|---------------------------------|--|--|
| BASEL | <i>B-Type Natriuretic Peptide for Acute Shortness of Breath Evaluation: BNP testing in patients with acute dyspnea has NOT effect on long-term mortality; morbidity quantified by days spent in-hospital, and economic outcome are improved at 12 months</i> | <i>Clin Chem 2007;53:1415-22</i> |
| Bayes Information Criteria -BIC | It is a likelihood measure in which lower values indicate better fit and in which a penalty is paid for increasing the number of variables. BIC is not influenced by the number of covariates | <i>Regression Modeling Strategies. New York. Springer Verlag. 2001</i> |
| BBB | Blood Brain Barrier | |
| BELLES | Beyond Endorsed Lipid Lowering with EBCT Scanning trial | <i>Circulation 2005;112:563-71</i> |
| Benchmarking | Continuous measurement of a process, product, or service compared to those of the toughest competitor, to those considered industry leaders, or to similar activities in the organization in order to find and implement ways to improve it. This is one of the foundations of both total quality management and continuous quality improvement. Internal benchmarking occurs when similar processes within the same organization are compared. Competitive benchmarking occurs when an organization's processes are compared with best practices within the industry. Functional benchmarking refers to benchmarking a similar function or process, such as scheduling, in another industry | |
| Benefit | Inclusive terms used to quantify the positive expected results or outputs of a proposed activity, project, or program expressed in monetary or non-monetary terms. Ideally, estimates of all benefits, outputs, or effectiveness expected to be received or achieved as a result of undertaking a proposed activity, program, or project. Adj: clinical Benefit, economic Benefit, Social Benefit, incremental Benefit. See: Risk/Benefit | |
| Benefit/Cost ratio | See Cost - Benefit analysis | |
| Beta Blockers | Beta blockers or beta-adrenergic blocking agents are a class of drugs used to treat a variety of cardiovascular conditions and some other diseases. Beta blockers block the action of epinephrine and norepinephrine on the β -adrenergic receptors in the body (primarily in the heart, peripheral blood vessels, bronchi, pancreas, and liver). There are three types of beta receptors: β 1-receptors located mainly in the heart, and β 2-receptors located all over the body, but mainly in the lungs, muscles and arterioles. β 3-receptors are less well characterized, but have a role in fat metabolism | |
| Beta-Blocker | An antihypertensive drug that limits the activity of epinephrine, a hormone that increases blood pressure | |
| bFGF | basic Fibroblast Growth Factor (bFGF): is a pleiotropic cytokine | <i>Leukemia 1997;11(2):258-65</i> |
| Bias | A difference between two values expressed in absolute values or in percentage | |
| BIC | Biomarkers in Cardiology | <i>Charité Universitaetzmedizin Berlin</i> |
| Big ET-1 | Predicting survival in severe CHF | |
| Binomial Distribution | The probability distribution associated with two mutually exclusive outcomes; used to model cumulative incidence rates and prevalence rates. The Bernoulli distribution is a special case of binomial distribution | |
| Bioimaging Markers | Disease Markers measured with an Imaging methodology | |
| Biological Variability | The Variability observed when a quantity is measured in different specimens from the same individual obtained over a time span. This variability is due to both imprecision of the measurement procedure, the metrological variability, and the rhythmic and random fluctuations of the quantity value around a virtual homeostatic set point, the intra-individual biological variability | |

| Definition | Description | References |
|-----------------------|--|--------------------------------------|
| Biomarker | A characteristic that is objectively measured (by biochemical, or imaging methodology, including molecular medicine) and evaluated as indicator of normal biological, pathogenic processes, or pharmacological responses to a therapeutic intervention Type 0; a marker of the natural history of a disease and correlates with known clinical indices. Type I: a marker that captures the response to a therapeutic intervention. Integrated Biomarkers: See IB | <i>Clin Pharm Ther</i> 2001;69-89 |
| Biomarkers Regulation | a) For the initial approval of a new molecular entity or first approval for a population at risk for CVD; b) for broadening a claim for approved cardiovascular disease risk-modifying agents; c) for approval of a marketed drug for a new indication | <i>Circulation</i> 2006; 113:2936-42 |
| BMI | Body Mass Index: a number that doctors use to determine the risk of cardiovascular disease created by a person being overweight. BMI is calculated using a formula of weight in kilograms divided by height in meters squared (BMI =W [kg]/H [m ²]). There is a tendency to substitute in the adults the BMI by the Waist to Hip ratio | |
| BNP B-type | Brain Natriuretic Peptide Type B. Also: Pro-pro BNP, pro BNP, BNP-32, pro-BNP77/08, B405+B288 Atrial and Ventricular cardiomyocytes produce proANP (1-126) and proBNP (1-108) respectively. Which are subsequently cleaved in Amino Terminal NT terminals with different number of amino acids. Myocytes' stretch and volume overload both stimulate the release of ANP and BNP as well as the amino-terminal counterparts | <i>Clin Chem</i> 2005;51:1624-31 |
| BP (Blood Pressure) | The force or pressure exerted by the heart in pumping blood; the pressure of blood in the arteries. Adj: Diastolic pressure, the pressure of blood inside arteries when the heart is at rest. Systolic pressure: The pressure of blood inside arteries when the heart contracts | |
| Brachial Ultrasound | Ultrasound technique to test for elasticity of the brachial artery after a release of a restriction placed on the upper arm for a period of time. This is a proposed diagnostic test for Cardio Vascular Diseases - CVD | |
| Brain Tumor | A brain tumor is any intracranial mass created by an abnormal and uncontrolled growth of cells either normally found in the brain itself (neurons, glial cells - astrocytes, oligodendrocytes, ependymal cells, lymphatic tissue, blood vessels), in the cranial nerves (myelin producing cells Schwann cells), in the brain envelopes (meninges), skull, pituitary and pineal gland, or spread from cancers primarily located in other organs (metastatic tumors) | |
| BRHS | <i>British Regional Heart Study</i> | <i>BMJ</i> 2000;321:199-204 |
| BV | Biovariability | |
| CA | Chronogranin A | |
| CAB | Coronary Artery Bypass: - Surgical rerouting of blood around a diseased vessel that supplies the heart. Done by grafting either a piece of vein from the leg or the artery from under the breastbone | |
| CAC | Coronary Artery Calcification | |
| CACS | Coronary Artery Calcium Scoring | <i>JACC</i> 1990;15:827-832 |
| CAD | Coronary Artery Disease: A condition caused by thickening of the walls of the arteries that supply blood to the heart muscle. When these arteries become blocked, the heart is deprived of oxygen and can become damaged. Severe cases can result in heart attack | |
| CAIII | Carbonic Anhydrase III | |
| CAIM | Computer Assisted Intravital Microscopy | |
| Calcium Score | A mathematical calculation related to the amount of calcium determined by multiplying the area of calcified plaque by a weighting factor based on the CT number or Hounsfield unit of the calcified plaque. Weighted volume of calcium | |

| Definition | Description | References |
|----------------------------|--|--|
| Calibration | Set of operations that establish, under specified conditions, the relationship between values of quantities indicated by a measuring instrument or measuring system, or values represented by a material measure or a reference material and the corresponding values realized by standards | |
| Calibrator | A material that is used to adjust instrumentation that is based on or traceable to a reference preparation or material, and whose values are determined by acceptable reference methods | |
| Calibrator Characteristics | A table showing the performance of each calibrator with respect to the calibration response curve, giving for each calibrator: - Concentration: The nominal calibrator concentration. - The Y bar: the average response - the X Calc: the estimated concentration from the average response for the calibrator. - Nominal: the result from XCalc divided by the value of the nominal concentration, expressed as a percentage. - Replicates: the number of replicates for the calibrator | |
| CAP | <i>Comparative Atorvastatin Pleiotropic Study</i> | |
| Capillary Leakage | The local injection of pure inflammatory mediators induces venular or capillary leakage. Vascular leakage in aseptic inflammation is biphasic, first venular, then capillary; the capillary phase is induced by the inflammatory reaction itself, possibly through a form of diffuse angiogenesis | <i>Am J Pathol. 1990;137(6):1353-63</i> |
| CAPTURE | <i>c7E3 Anti Platelet Therapy in Unstable Refractory angina</i> | <i>Circulation 1998;98:1358-1364</i> |
| CARE | <i>Cholesterol and Recurrent Events</i> | <i>Am J Cardiol 1991;68:1436-46</i> <i>Am J Cardiol 1995;75:621-23</i> <i>Am J Cardiol 1995;76:98C-106C</i> <i>N Engl J Med 1996;335:1001-9</i> <i>Circulation 1998;97:1446-52</i> |
| Carotid Plaque | Plaque inflammation in the carotid arteries is a major risk factor for Stroke. Atherosclerotic plaque typically develops around the region of the internal and common carotid artery bifurcation. Knowledge of the differential wall motion displacements across the carotid bifurcation in normal and in diseased arteries may thus be useful in the study of atherosclerotic disease. An important clinical application is the identification of high-risk plaques that are vulnerable to rupture, leading to stroke. It is hoped the vulnerable plaque may be predicted by identifying pertinent features of the carotid plaque wall motion behavior throughout the cardiac cycle | |
| Carotid Stenosis | Carotid vessel narrowing is a relatively poor predictor of stroke risk; most patients with severe carotid artery narrowing remain stroke-free for over 5 years without treatment, although surgery or medication may be employed when significant carotid plaque is found | |
| Carotid Syncope | Syncope derived from Carotid blood flow impairment | |

| Definition | Description | References |
|--------------------|---|---|
| Carotid Ultrasound | Various ultrasound techniques have been used to detect and track the vessel wall motion. Computational techniques have mainly been based on analysis of the B-mode grayscale images, M-mode, analyses of the raw RF ultrasound data and Doppler techniques. Tissue Doppler Imaging (TDI) is a relatively new commercial technique, originally developed for imaging the myocardium, which has found increasing applications in echocardiography. TDI is basically a color Doppler technique that has been optimized to provide images of tissue motion rather than blood flow, and is capable of high spatial and temporal resolution. The signal processing techniques employed to extract the tissue velocity information from the RF ultrasound data are typically based on time domain cross-correlation techniques or autocorrelation techniques | |
| CART | Classification and Regression Tree: basically a bivariate, explorative methodology using binary recursive partitioning to classify patients in homogeneous, clinically important risk groups, on the basis of optimal cut-points of binary, ordinal, or continuous covariates that maximizes a certain split criterion | <i>Stat Med</i> 1997;16:717-27 <i>Clin Chem</i> 2005;51(9): 1624-31 |
| Case Series | Is a report on a series of patients with an outcome of interest. No control group is involved | |
| Caspase-3 | Caspase-3 (CPP32, apopain) has been identified as being a key mediator of apoptosis of mammalian cells and is belonging to the family of aspartate-specific cysteinyl proteases or caspases | <i>Science</i> 1997;278:294-98 |
| CAST | Cardiac Arrhythmia Suppression Trial | <i>NEJM</i> 1989;321:406-12 |
| CatK | Cathepsin K. A lysosomal cysteine protease localizes in rupture-prone areas such as the fibrous cap and plaque shoulders, as well as at the site of plaque ruptures | <i>Circulation</i> 2007;115:2292-8 |
| CBF | Cerebral Blood Flow | |
| CB Receptors | Cannabinoids Receptors: the CB1 receptor, essentially located in the CNS, but also in peripheral tissues, and the CB2 receptor, found only at the periphery. CB1 and CB2 cannabinoid receptors are the primary targets of endogenous cannabinoids (endocannabinoids). These G protein-coupled receptors play an important role in many processes, including metabolic regulation, craving, pain, anxiety, bone growth, and immune function. Cannabinoid receptors can be engaged directly by agonists or antagonists, or indirectly by manipulating endocannabinoid metabolism. | <i>Ann Rev Pharm Toxic</i> 2006;46:101-22 |
| CCC | Coronary Calcium Content | |
| CCL1 | Chemokine ligand 1 (CCL1) is a small glycoprotein secreted by activated T cells that belongs to a family inflammatory cytokines known as chemokines. CCL1 attracts monocytes, NK cells, and immature B cells and dendritic cells by interacting with a cell surface chemokine receptor called CCR8. This chemokine resides in a large cluster of CC chemokines on human chromosome 17 | <i>Sciences</i> 1992;89:2950-4. <i>J Biol Chem</i> 1997;272:17251-4 |
| CCS | Coronary Calcium Score | |
| CD40L | CD40 Ligand is a trans membrane glycoprotein expressed by B lymphocytes, but also detected on other cell types (endothelial, monocytes, smooth muscle cells in atheromas) or tumors, particularly carcinomas. As for CD40L, CD40 is part of a large protein family, the TNF-receptor family. The CD40L trimer is expected to bind three CD40 receptor molecules, very much in the same way the TNFbeta trimer binds three TNF-55R receptors | <i>Circulation</i> 2001;104:2266-68 <i>Clin Chem</i> 2007;53:1231-34 |
| CDC | Centers for Disease Control and Prevention | |
| CECs | Circulating Endothelial Cells: index of endothelia damage | |
| CETP | Cholesterol Ester Transfer Protein | |
| CER | Control Event Rate: See Event Rate | |

| Definition | Description | References |
|---------------------------------|--|---|
| Cerebrovascular Diseases | CVD forms: Cerebral embolism: a blood clot formed in one part of the body and then carried by the bloodstream to the brain, where it blocks an artery. Cerebral hemorrhage: bleeding within the brain resulting from a ruptured blood vessel, aneurysm, or head injury. Cerebral thrombosis: formation of a blood clot in an artery that supplies part of the brain | |
| CHD | Coronary Heart Disease | |
| Chemotactic Protein | They are chemokines with important immune functions, such as the recruitment of monocytes into the arterial wall: they are promoting atherosclerosis . See also MCP-1 | <i>Proc Natl Acad Sci U S A 87: 5134–5138.</i> |
| Chest Pain | Chest pain is a symptom of a number of serious conditions and is generally considered a medical emergency. The nature of the pain and the circumstances of its appearance together with the medical examination and semeiotic should distinguish angina, the pain of myocardial infarction, the pain associated with a dissecting aneurysm, a pleuric pain, a chest trauma, and other clinical situations | |
| CHF | Chronic Heart Failure | |
| Chimerin | n-Chimerin: GTPase activating protein that is specific for RAC GTP-BINDING PROTEINS. It is expressed primarily in the brain and may be involved in signal transduction. The alternatively spliced form of CHIMERIN 1 (alpha-2 Chimerin) contains an additional homology domain and is expressed in both the brain and testes | <i>J Neuroscience 2005;25:12-41</i> |
| Chi-Squared Test of Association | A distribution in which a variable is distributed like the sum of the squares of any given independent random variable, each of which has a normal distribution with mean of zero and variance of one. The chi-square test is a statistical test based on comparison of a test statistic to a chi-square distribution. The oldest of these tests are used to detect whether two or more population distributions differ from one another | |
| CHMP | Committee for Medicinal Products for Human Use | |
| Cholesterol | A lipid that occurs naturally in the body, in animal fats and in dairy products, and that is transported in the blood. Limited quantities are essential for the normal development of cell membranes. Links: Total Cholesterol: TC. HDL Cholesterol: HDL-C. LDL Cholesterol: LDL-C | |
| Cholesterol Ratio | LDL-C / HDL-C or ApoB / ApoAI | |
| Choline | Choline is generated by the cleavage of membrane phospholipids by phospholipase Whole Blood Choline - WPCHO and plasma Choline (PCHO) concentrations increase after stimulation of phospholipase D (PLD) and the activation of surface receptors in coronary plaque destabilization | <i>Art Thr Vasc Biol 2000;20:135-43</i> <i>Am J Card 2003;91:1060-67</i> |
| CHS | Cardiovascular Health Study | <i>Art Thr Vasc Biol 1997;17:1121-27</i> |
| CIMT | Carotid Intima Media Thickness - it is a well-established measure for assessing the cardiovascular risk | <i>Stroke 2000;31:2426-30</i> |
| Circadian rhythm | The rhythmic repetition of certain phenomena in living organisms at about the same time each day. Without cues provided by light, the human circadian cycle lasts 25.9 hours | |
| CK | Creatin Kinase | |
| CK-MB | Isoenzyme of CK: since a high total CK could indicate damage to either the heart or other muscles, CK–MB helps to distinguish between these two sources | <i>Clin Chem Lab Med 2004;42:3–8.</i> |
| CLAS | Clinical Ligand Assay Society | |
| Class I-III | Indication from AHA for the measurement of a proposed marker | |
| Clinical Benefit | See Benefit | |
| Clinical Endpoints | A characteristic or a variable that reflects how the patient feels, functions, or survives | <i>Clin Pharm Ther 2001;69-89</i> |

| Definition | Description | References |
|-----------------------------|---|--|
| Clinical pathway | A treatment regime, agreed upon by consensus, which includes all the elements of care, regardless of the effect on patient outcomes. It is a broader look at care and may include tests and x-rays that do not affect patient recovery. Syn: Clinical path | |
| Clinical Practice Guideline | Is a systematically developed statement designed to assist practitioner and patient make decisions about appropriate health care for specific clinical circumstances | |
| Clinical Risk | Risk of errors and adverse events occurring with the health system can be divided into the following five areas: · The risk of individual clinical incompetence or malpractice: · The risk of systems failure: · Risks imposed by cost constraints: · Patients' perception of risk: · Risks inherent in clinical procedures: Patients, healthcare professionals, health managers and health organizations are together asked to help in defining the most effective way of managing risk generally and in relation to individual cases as well as identifying where the responsibility for different levels of risk should stay | |
| Clinical Trials | Pre-planned studies of the safety, efficacy, or optimum dosage schedule (if appropriate) of one or more diagnostic, therapeutic, or prophylactic drugs, devices, or techniques selected according to predetermined criteria of eligibility and observed for predefined evidence of favorable and unfavorable effects | |
| Clinical Trials, Phase I | Studies performed to evaluate the safety of diagnostic, therapeutic, or prophylactic drugs, devices, or techniques in healthy subjects and to determine the safe dosage range (if appropriate). These tests also are used to determine pharmacologic and pharmacokinetic properties (toxicity, metabolism, absorption, elimination, and preferred route of administration). They involve a small number of persons and usually last about 1 year. This concept includes phase I studies conducted both in the U.S. and in other countries | <i>fda.gov</i> |
| Clinical Trials, Phase II | Studies that are usually controlled to assess the effectiveness and dosage (if appropriate) of diagnostic, therapeutic, or prophylactic drugs, devices, or techniques. These studies are performed on several hundred volunteers, including a limited number of patients with the target disease or disorder, and last about two years. This concept includes phase II studies conducted in both the U.S. and in other countries | <i>fda.gov</i> |
| Clinical Trials, Phase III | Comparative studies to verify the effectiveness of diagnostic, therapeutic, or prophylactic drugs, devices, or techniques determined in phase II studies. During these trials, patients are monitored closely by physicians to identify any adverse reactions from long-term use. These studies are performed on groups of patients large enough to identify clinically significant responses and usually last about three years. This concept includes phase III studies conducted in both the U.S. and in other countries | <i>fda.gov</i> |
| Clinical Trials, Phase IV | Planned post-marketing studies of diagnostic, therapeutic, or prophylactic drugs, devices, or techniques that have been approved for general sale. These studies are often conducted to obtain additional data about the safety and efficacy of a product. This concept includes phase IV studies conducted in both the U.S. and in other countries | <i>fda.gov</i> |
| CML | Ne-Carboxymethyl Lysine | <i>Journal of Lipid Research, Vol. 44, 487-493, March 2003</i> |
| cMR | Cardiovascular Magnetic Resonance. Enhanced CMR/Delayed Enhancement | |
| cMRI | Cardiac Magnetic Resonance Imaging | |
| CMS | The Centers for Medicare and Medicaid Services | |
| CMV | Cytomegalovirus Virus | |

| Definition | Description | References |
|------------------------------------|---|---------------------------------------|
| CNR cMR | Contrast-to-Noise Ratio in CMR | |
| Cohort Study | Involves identification of two groups (cohorts) of patients, one which did receive the exposure of interest, and one which did not, and following these cohorts forward for the outcome of interest | |
| Co- morbidity | The presence of co-existing or additional diseases with reference to an initial diagnosis or with reference to the index condition that is the subject of study. Co morbidity may affect the ability of affected individuals to function and also their survival; it may be used as a prognostic indicator for length of hospital stay, cost factors, and outcome or survival | |
| Complication | A detrimental patient condition that arises during the process of providing health care, regardless of the setting in which the care is provided. For instance, perforation, hemorrhage, bacteremia, and adverse reactions to medication (particularly in the elderly) are four complications of colonoscopy and its associated anesthesia and sedation. A complication may prolong an inpatient's length of stay or lead to other undesirable outcomes | |
| Confidence Interval | A confidence interval gives an estimated range of values which is likely to include an unknown population parameter, the estimated range being calculated from a given set of sample data | |
| Confidence Level | The Confidence level - CI - is the probability value (1 - alfa) associated with a confidence interval. It is often expressed as a percentage. For example, say alfa= 0.05 = 5%, then confidence level = (1-0.05) = 0.95, that is, a 95% confidence level. | |
| Confounding Factors (Epidemiology) | Factors that can cause or prevent the outcome of interest, are not intermediate variables, and are not associated with the factor(s) under investigation. They give rise to situations in which the effects of two processes are not separated, or the contribution of causal factors cannot be separated, or the measure of the effect of exposure or risk is distorted because of its association with other factors influencing the outcome of the study | |
| COPE | <i>Colchicine for Acute Pericarditis</i> | <i>Rheumatology 2006;45:iv32-iv38</i> |
| Copeptin | Copeptin is a glycopeptide comprising the C-terminal part of the AVP prohormone Arginine Vasopressin - AVP which is a key regulator of water balance, but its instability makes reliable measurement difficult and precludes routine use | |
| Coronary Angiography | See Angiography | |
| Coronary arteria | A major artery (right and left) in the neck supplying blood to the brain | |
| Coronary Artery Score | Total lumen volume, total plaque volume, total vessel volume, percent atheroma volume | <i>Circulation 2007;115:1851-57</i> |
| Coronary Calcification | See CAC - Coronary Artery Calcification | |
| Coronary Calcium Score | See CACS - Coronary calcium Score | <i>JACC 1990;15:827-32</i> |
| Cost - Benefit | Cost-benefit analysis is the process of weighing the total expected costs vs. the total expected benefits of one or more actions in order to choose the best or most profitable option. Converts effects into the same monetary terms as the costs and compares them | |
| Cost Ability | Ability of a provision to impact on costs | |
| Cost Containment | A wide variety of strategies or methods whose primary goal is to control the rising cost of health care, thus making health care more affordable. These strategies and methods may include, but are not limited to government regulation, managed care programs, payment policies, global budgets, rate setting, consumer education, and utilization management. Link: Cost minimization | |

| Definition | Description | References |
|-----------------------------------|---|--|
| Cost effectiveness | As that which results in cost savings to the health care system by definition, cost effectiveness is calculated using an incremental (or marginal) comparison with more traditional strategies | <i>Nature Reviews 2005;4:1-9</i> <i>Nature Reviews 2006;5:897-902</i> |
| Cost/Benefit | See Cost-Benefit Analysis Often, this involves monetary calculations of initial expense vs. expected return. For example, a product manager may compare manufacturing and marketing expenses to projected sales for a proposed product, and only decide to produce it if he expects the revenues to eventually recoup the costs | |
| Cost-Effectiveness Analysis - CEA | Converts effects into health terms and describes the costs for some additional health gain (e.g. cost per additional MI prevented) | |
| Costs of Resources | Cost of resources employed in a project | |
| Cost-Utility Analysis | See Cost-Benefit Analysis. Often, this involves monetary calculations of initial expense vs. expected return. For example, a product manager may compare manufacturing and marketing expenses to projected sales for a proposed product, and only decide to produce it if he expects the revenues to eventually recoup the costs | |
| CPITN | Community Periodontal Index of Treatment Needs: method of periodontal diagnosis | |
| CRF | Corticotropin-releasing factor | |
| Critical Path Initiative | Innovative/Stagnation: Challenge and Opportunity on the Clinical Path to New Medical Products | <i>FDA 2004</i> |
| CRO | Contract Research Organization | |
| Crossover Study Design | The administration of two or more experimental therapies one after the other in a specified or random order to the same group of patients | |
| Cross-Sectional Study | The observation of a defined population at a single point in time or time interval. Exposure and outcome are determined simultaneously. Decision Analysis is the application of explicit, quantitative methods to analyze decisions under conditions of uncertainty | |
| CRP | C Reactive Protein. See: hs-CRP - high sensitivity CRP, CRP determination | |
| Crude Probability of death | The crude probability of death measures the mortality patterns actually experienced in a cohort of cancer patients on which many possible causes of death are acting simultaneously. This option estimates the probability of dying from cancer and dying from other causes in a cohort of cancer patients. The measure uses expected survival (obtained from the expected life tables) to estimate the probability of dying from other causes in each interval | |
| CSA | Chronic Stable Angina | |
| CSF | Cerebro-Spinal Fluid | |
| CSO | Centrum SemiOvale in Brain | |
| CSS | Churg-Strauss Syndrome is a severe allergic vasculitis, with inflammation and thrombosis of small vessels | <i>Chest 1998;114:1484-9</i> |
| CTA | Computerized Tomography Angiography | |
| cTnT cTnI | Cardiac Troponin T and Cardiac Troponin I | <i>JACC 2001;38:478-85</i> <i>JACC 2006;48:1763-64</i> |
| Cumulative Mortality Rate | The comparative mortality (or morbidity) figure is a simple summary of the incidence rate ratios between the observed and standard population which is obtained by dividing the directly standardized rate for the observed population by the crude rate for the standard population. In practice the CMR is sometimes expressed as percentage | |

| Definition | Description | References |
|-------------------------|--|---|
| CV | Coefficient of Variation-CV in the probability theory and statistics, it is a measure of dispersion of a probability distribution. It is defined as the ratio of the standard deviation to the mean: the coefficient of variation is a dimensionless number that allows comparison of the variation of populations that have significantly different mean values. It is often reported as on a scale of 0 to 100% by multiplying the above calculation by 100. A coefficient of variation of 1 percent would indicate that an estimate could vary slightly due to sampling error, while a coefficient of variation of 50 percent means that the estimate is very imprecise | |
| CVa | Analytical Variation | |
| CVi | Within-subject biological Variation | |
| CVp | Pre-analytical Variation | |
| Cytokines | These are cell-derived chemicals that are secreted by various types of cells and act on other cells to stimulate or inhibit their function. Chemicals derived from lymphocytes are called "lymphokines." Chemicals derived from lymphocytes that act on other white blood cells are called "interleukins," that is, they interact between two types of leukocytes. | |
| CWS - IWS | Cortical Water-Shed and Internal Water-Shed: in carotoid diseases infarcts can occur in the cortical as well as internal watershed, or both | <i>Stroke 2005;36:567-77</i> |
| Cystatin C | Evidence suggests that serum cystatin C is a reliable marker of Glomerular Filtration Rate – GFR. Moreover, cystatin C may more readily detect subtle decrements of GFR than does serum creatinine | <i>Curr Opin Nephrol Hypertens 2001;10:551–3</i> <i>Clin Nephrol 2000;54:203–9.</i> <i>Clin Chem 2002; 48: 2256 - 2259.</i> |
| DB | Data Base | |
| DBP | Diastolic Blood Pressure | |
| DCCV | Direct Current Cardio Version | |
| DCM | Dilated cardiomyopathy | |
| DCMi | Inflammatory DCM | |
| Death rate | Death rate (age-adjusted): A death rate that has been standardized for age so different populations can be compared or the same population can be compared over time | |
| Delayed Enhancement -DE | Delayed enhancement method to depict the myocardial (scar or inflammation) by contrast sensitive techniques due to delayed washout of the contrast agent | |
| DHA | Docosahexaenoic Acid | |
| D-dimer | D-dimer is an end product derived from plasmin-mediated degradation of cross linked fibrin clots. D-dimer measurement has proved to be a sensitive marker for the evaluation of disseminated intravascular coagulation (DIC). In addition, D-dimer can effectively rule out those patients with a low or a moderate probability of venous thromboembolism (VTE) such as deep vein thrombosis (DVT) or pulmonary embolism (PE) | |
| Diabetes | A condition in which the body doesn't produce the right amount of insulin, the hormone that allows cells to absorb glucose from the bloodstream | |
| Diabetic | Condition related to the Diabetes | |
| Diastolic dysfunction | Abnormal left ventricular relaxation, distensibility or diastolic stiffness | |
| DIC | Disseminated Intravascular Coagulation | |
| Dilated cardiomyopathy | Primary or ischemic dilatation of the ventricles associated with left ventricular dysfunction | |
| DINE | Damage-induced neuronal endopeptidase (DINE) is a novel metallopeptidase and is expressed in response to various neuronal injuries | <i>J Neurosc 2002;22(21):9410-18</i> |

| Definition | Description | References |
|-----------------------|--|----------------------------------|
| Discriminant Analysis | A statistical analytic technique used with discrete dependent variables, concerned with separating sets of observed values and allocating new values. It is sometimes used instead of regression analysis | |
| Diuretic | A diuretic is a substance that removes water from the body by promoting urine formation and the loss of salt (sodium) | |
| DOCA | Desoxy-corticosterone-acetate | |
| Doppler ultrasound | Doppler ultrasound - A technology that uses sound waves to assess blood flow within the heart and blood vessels and to identify leaking valves. Form: doppler echocardiography | |
| Double-Blind Method | A method of studying a drug or procedure in which both the subjects and investigators are kept unaware of who is actually getting which specific treatment | |
| DTREG | Decision Trees Regression is a powerful statistical analysis program that generates classification and Regression Trees and Support Vector Machine models that can be used to predict values. The process of extracting useful information from a set of data values is called Data Mining. Many techniques have been developed for data mining, and there is an art to selecting and applying the best method for a particular situation. DTREG implements the most powerful predictive modeling methods that have been developed. Methods are including Tree Boost and Decision Tree Forests as well as Support Vector Machine and Logistic Regression models. Benchmarks have shown these methods to be highly effective for analyzing and modeling many types of data | |
| dTx | dehydrothromboxane B2 | |
| Duke Treadmill Score | The Duke treadmill score is a quantitative means of expressing cardiac risk derived entirely from the exercise ECG. It incorporates depth of ST depression, treadmill time (METS) and angina on the treadmill. The score is calculated as duration of exercise in minutes - (5 x the maximal net ST-segment deviation) during or after exercise, in millimeters - (4 x the treadmill angina index). The angina index has a value of 0 if there is no angina during exercise, 1 if the patient had non limiting angina and 2 if angina was the reason the patient stopped exercising. High risk scores of < - 10 give a 5 year survival rate of <75%, intermediate score of -10 to 4+ give a 5 year survival risk of 75 - 95% and low risk scores of > + 5 give a 5 year survival rate of > 95% | |
| DWI | Diffusion Weighted Index in MRI is useful in detecting focal ischemia even in the hyper acute stage | <i>Ann Neurol 1995;37:231-21</i> |
| EBCT | Electron Beam Computed Tomography | <i>Am J Card 1994;74:1272-74</i> |
| EBE | Emerging Biopharmaceutical Enterprises | |
| EC | European Commission | |
| ECG or EKG | Electrocardiogram : a test in which several electronic sensors are placed on the body to monitor electrical activity associated with the heartbeat | |
| Echo Dobutamine | The dobutamine stress echo test involves taking dobutamine under close monitoring. The test is used to evaluate heart and valve function when the patient is unable to exercise on a treadmill or stationary cycle. | |

| Definition | Description | References |
|---------------------|---|--|
| Echocardiography | A method of studying the heart's structure and function by analyzing sound waves bounced off the heart and recorded by an electronic sensor placed on the chest. A computer processes the information to produce a one-, two- or three-dimensional moving picture that shows how the heart and heart valves are functioning. Links: Transesophageal echocardiography - A diagnostic test that analyzes sound waves bounced off the heart. The sound waves are sent through a tube-like device inserted in the mouth and passed down the esophagus (food pipe), which ends near the heart. This technique is useful in studying patients whose heart and vessels, for various reasons, are difficult to assess with standard echocardiography | |
| ECM | Extra cellular Matrix | |
| ECS | Endocannabinoids System | |
| Ecological Survey | Based on aggregated data for some population as it exists at some point or points in time; to investigate the relationship of an exposure to a known or presumed risk factor for a specified outcome | |
| Economic analysis | The comparison, with money as the index, of those costs and benefits to the wider economy that can be reasonably quantified, including all social costs and benefits of a project | |
| Economic evaluation | Comparative analysis of alternative courses of action in terms of both their costs and consequence | |
| ED | Emergency Department. Syn: Emergency Unit - EU | |
| Edema | An excessive accumulation of serous fluid in tissue spaces or a body cavity | |
| EDMA | European Diagnostic Manufacturers Association | |
| EEG | Electroencephalogram: a test that can detect and record the brain's electrical activity. The test is done by pasting metal disks, called electrodes, to the scalp | |
| EEM | External Elastic Membrane borders (of the carotid lumen) | |
| EER | Experimental Event Rate: See Event Rate | |
| Effectiveness | The extent to which actual outcomes are achieved, in terms of the planned outcomes, via relevant outputs, programs or administered expenses. The effectiveness of an output or program should be distinguished from its efficiency, which concerns the adequacy of its administration | |
| Efficacy | In general, efficacy is the ability to produce an effect, usually a specifically desired effect. The maximum ability of a drug or treatment to produce a result regardless of dosage | |
| EFPIA | European Federation of Pharmaceutical Industries Associations | |
| Ejection fraction | A measurement of blood that is pumped out of a filled ventricle. The normal rate is 50 percent or more | |
| EMB | Endo Myocardial Biopsy | |
| EMA-EMA | European Agency for the Evaluation of Medicinal Products | |
| Endothelin-1 | Endothelin (ET)-1 is an endothelium-derived peptide with potent vasoconstrictor and proliferative properties. The ET system is activated in several cardiovascular disease states associated with functional and structural vascular changes, including hypertension and heart failure | <i>NEJM</i> 1995;333(6):356-63 <i>Pharmacotherapy</i> 2002; 22(1):54-65 |

| Definition | Description | References |
|------------------------------|---|--|
| Endothelium in Atherogenesis | Endothelium in Atherogenesis: the early endothelium damage is prompted by several factors including oxidized LDL, with protective effect of HDL; activated neutrophils and macrophages adhere to the damaged endothelium; activated macrophages become foam cells by uptake of oxidized LDL, and synthesize Angiotensin II to promotes oxidative stress caused by reactive oxygen species (ROS) and stimulate the formation of VICAM, and promotes growth of Vascular Smooth Cells (VSM) | |
| Endpoint | Clinical endpoint. A variable that reflects the clinical condition of a subject; it can be primary, intermediate, ultimate, or surrogate | |
| <i>ENTIRE-TIMI</i> | <i>Enoxaparin and Tenecteplase with or without glycoprotein IIb/IIIa Inhibitor as Reperfusion strategy in ST elevation MI-Thrombolysis In Myocardial Infarction</i> | |
| EPA | Eicosapentaenoic Acid | |
| EPS | Electrophysiological study. A test that uses cardiac catheterization to study patients who have arrhythmias (abnormal heartbeats). An electrical current stimulates the heart in an effort to provoke an arrhythmia, which is immediately treated with medication. EPS is used primarily to identify the origin of arrhythmias and to test the effectiveness of drugs used to treat abnormal heart rhythms | |
| ER | Emergency Room | |
| Ers | Estrogen receptors (Progesterone Receptor-PR Estrogen Receptors-AR, Sex Hormone Receptors-SSHRs) | |
| <i>ERASE</i> | <i>Effect of rHDL on Atherosclerosis-Safety and Efficacy trial</i> | <i>JAMA 2007;297:1675-82</i> |
| Error | Error of commission: an error which occurs as a result of an action taken. Examples include when a drug is administered at the wrong time, in the wrong dosage, or using the wrong route; surgeries performed on the wrong side of the body; and transfusion errors involving blood cross-matched for another patient. Error of omission: an error which occurs as a result of an action not taken, for example, when a delay in performing an indicated cesarean section results in a fetal death, when a nurse omits a dose of a medication that should be administered, or when a patient suicide is associated with a lapse in carrying out frequent patient checks in a psychiatric unit. Errors of omission may or may not lead to adverse outcomes | |
| Erythropoietin | Erythropoietin (EPO): a hormone produced by the kidney that promotes the formation of red blood cells in the bone marrow. EPO is a glycoprotein. Human EPO has a molecular weight of 34,000. The kidney cells that make EPO are sensitive to low oxygen levels in the blood. These cells release EPO when the oxygen level is low in the kidney. EPO then stimulates the bone marrow to produce more red cells and thereby increase the oxygen-carrying capacity of the blood | <i>Proc Nat Acad Sci USA 2000;97:19526-31</i> |
| ESA | Sub-Arachnoid hemorrhage | |
| ESC/WG | European Society of Cardiology/ Working Group on Acute Cardiac Care/ Study Group on Biomarkers in Cardiology | |
| <i>ESETTICID</i> | <i>European Study of Epidemiology and Treatment of Cardiac Inflammatory Disease Trial</i> | <i>Eur Heart J 1995;16(Suppl O):173-5</i> |
| ESR | Erythrocytes Sedimentation Rate | |
| <i>ESSENCE</i> | <i>Efficacy and Safety of Subcutaneous Enoxaparin in Non-Q-wave Coronary Events</i> | |
| <i>ET-1</i> | <i>Endothelin-1 predicting survival in severe CHF</i> | <i>NEJM 1995;333(6):356-63 Pharmacotherapy 2002; 22(1):54-65</i> |
| EU | European Union | |

| Definition | Description | References |
|----------------------------|---|--|
| Evaluation | Evaluation has several distinguishing characteristics relating to focus, methodology, and function. Evaluation assesses the effectiveness of an ongoing program in achieving its objectives. Evaluation relies on the standards of project design to distinguish a program's effects from those of other forces. Evaluation aims at program improvement through a modification of current operations. Adj: clinical evaluation, economic evaluation | |
| Event Rate | Is the proportion of patients in a group in whom the event is observed. Thus, if out of 100 patients, the event is observed in 27, the event rate is 0.27. Links: Control Event Rate (CER) and Experimental Event Rate (EER) are used to refer to this in control and experimental groups of patients respectively | |
| Evidence-Based Health Care | Extends the application of the principles of Evidence-Based Medicine (see below) to all professions associated with health care, including purchasing and management | |
| Evidence-Based Medicine | EBM is the conscientious, explicit and judicious use of the current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research | <i>Evidence Based Medicine Third Edition. Churchill Livingstone: Edinburgh, 2005</i> |
| FABP | Fatty Acid Binding Protein | <i>Mol & Cell Proteomics 2004;3:66-72</i> |
| False positive/negative | False Positive : a test result that incorrectly says the analyte, disease, or condition is present when it is actually not present. False positives can be due to human error, test error, or substances in the sample that interfere with the test. False Negative: a test result that incorrectly says the analyte, disease, or condition is not present when it actually is present. False negatives can be due to human error, test error, or substances in the sample that interfere with the test | |
| FDA | Food and Drug Administration | |
| FDG-PET | Positron Emitting Tomography with (18) F-fluorodeoxyglucose (FDG). This procedure detects active malignant lesions, and may also be used to stage and monitor the response to therapy of malignant disease | |
| FER-HDL | Fractional Esterification Rate of Cholesterol plasma depleted of ApoB | <i>Atherosclerosis 1997;135:205-12</i> |
| FFA | Free Fatty Acids are bound with albumin, when a small amount of total are unbound uFFA and are soluble in plasma. Catecholamins or ischemia increase the concentration of FFA trough the release from adypocytes by lipolysis | <i>Lancet 1994;343:155-8</i> |
| FFAu | Unbound Free Fatty Acids represent the primary metabolic source for myocardium. During hypoxia, ischemia and necrosis their level in plasma is increased | |
| FGCT | Fast-gated helical or spiral CT | <i>AJR 2001; 176:1295-1298</i> |
| FHS | Framingham Heart Study | <i>Arch Intern Med 2005;165:2473-78</i> |
| Fibrillation | Rapid, uncoordinated contractions of individual heart muscle fibers. The heart chamber involved can't contract all at once and pumps blood ineffectively, if at all. | |
| Fibrinogen | Plasma protein | |
| Flow Mediated Dilation | A measurement of the ability of the artery to relax and expand to accommodate increased blood flow. It is a validated non invasive physiological measure widely used as a research tool to quantify endothelium function | <i>Lancet 1992;340:1111-15 Circulation 2007;115:2390-97</i> |

| Definition | Description | References |
|---------------------|--|--|
| Flutter | The rapid, ineffective contractions of any heart chamber. A flutter is considered to be more coordinated than fibrillation | |
| FP6 | EU Framework Programme 6 (2002-2006) | |
| FP7 | EU Framework Program 7 (2007-2013) | |
| Framingham Estimate | Estimate of 10-Year Risk for Coronary Heart Disease Framingham Point Scores | |
| FRISC | <i>Fragmin during Instability in Coronary artery</i> | <i>Curr Contr Trials Cardio Med 2001, 2:233-239</i> |
| FRISC II | <i>Fragmin and fast Revascularization during Instability in Coronary artery disease</i> | <i>JACC 2002; 39:1601-07</i> |
| FRS | Framingham Risk Score: It is used for the risk assessment in subjects prone to CHD | |
| GA | Glycoprotein IIB/IIIA – antagonist | |
| gadolinium-DTPA | Gadolinium diethylene triamine penta acetate. Also Gd-DTPA | |
| GC-MS | Gas Chromatography-Mass Spectrometry | |
| G-CSF | Granulocyte Colony-Stimulating Factor (G-CSF or GCSF) is a hormone. It is a glycoprotein, growth factor or cytokine produced by a number of different tissues to stimulate the bone marrow to produce granulocytes and stem cells | <i>Cell Cycle 2005;4:1753-57</i> |
| GDF-15 | Growth-Differentiation Factor-15: a member of the transforming growth factor-beta cytokine super family, is secreted by cardiomyocytes during ischemia and reperfusion | <i>Circulation 2007;115:962-71</i> |
| GDP | Gross Domestic Product | |
| Gender | Refers to an individual's male or female status and issues related to that status | |
| Genomics | Scientific approach to the complex of genes, gene products evaluation in biological field: clinical, chemical, imaging, functional, structural | www.genomicglossaries.com |
| GFR | Glomerular Filtration Rate | |
| GGE | Gradient Gel Electrophoresis | |
| GLP | Good Laboratory Practices | |
| GMP | Good Manufacturing Practices | |
| GPBB | Glycogen Phosphorylase BB is a glycolytic enzyme that plays a role in the regulation of carbohydrate metabolism. GPBB is associated with glycogen in a complex, and in ischemia glycogen is broken down and GPBB become free. In myocardial ischemia its early release is and indicator of irreversible, myocardial damage | <i>Exp Mol Med. 2002 31;34(6):444-50</i> <i>Clin Chem 2007;51(5):810-24</i> |
| GPIIB/IIIA | Glycoprotein receptor responsible for platelet thrombus formation | |
| GPLL | Glycogen Phospholipase Insoenzyme LL | <i>FEBS Lett. 2004;577(1-2):81-6</i> |
| GPMM | Glycogen Phospholipase Insoenzyme MM | <i>J Biol Chem 2003;278:52, 52432-36</i> |
| GPx - 1 | Glutathione Peroxidase has a central role in the control of reactive oxygen species | <i>NEJM 2003;349:1605-1613</i> |
| GRACE | <i>Global Registry of Acute Coronary Events Launched in 1999. The Global Registry of Acute Coronary Events is an international database designed to track outcomes of patients presenting with acute coronary syndromes, including myocardial infarction or unstable angina. GRACE includes hospitals in North America, South America, Europe, Asia, Australia and New Zealand. (GRACE) Risk Score</i> | <i>JAMA. 2004;291:2727-33</i> <i>EHJ 2005 26(9):865-872</i> |
| gRE CMR | (early) global Relative Enhancement CMR (can reflects myocardial hyperemia) | <i>JACC 2005;345:1815-22</i> |
| GTE | Polyacrylamide Electrophoresis | |
| GUSTO | <i>Global Utilization of Streptokinase and Tissue Plasminogen Activator for Occluded Coronary Arteries trial</i> | <i>NEJM 1994;331:277-78</i> <i>EHJ 2000 21(23):1928-36</i> |

| Definition | Description | References |
|--|--|--|
| Hazard ratios | Describes the relative risk of the complication based on comparison of event rates | |
| HDL subclasses | High Density Lipoprotein subclasses | <i>NEJM 2007;356:1620-30</i> |
| Head-up Tilting | Test characterized by progressive (20°, 40°, 60°,80°) tilting of a head-up tilting table while the patient is monitored (arterial pressure, heart rate and in physiological tests echocardiography) | |
| Health economy | A comparative analysis of alternative courses of actions in terms of their costs and consequences | |
| Health Transition | Demographic and epidemiologic changes that have occurred in the last five decades in many developing countries and that are characterized by major growth in the number and proportion of middle-aged and elderly persons and in the frequency of the diseases that occur in these age groups. The health transition is the result of efforts to improve maternal and child health via primary care and outreach services and such efforts have been responsible for a decrease in the birth rate; reduced maternal mortality; improved preventive services; reduced infant mortality, and the increased life expectancy that defines the transition | |
| Heart-type Fatty Acid Binding Proteins | Fatty-acid-binding protein H-FABP proposed as a plasma marker for the estimation of myocardial infarct size in humans. The rapid release of FABP into plasma during ischemia indicates the possibility of using this protein as a biochemical marker for ischemic myocardial injury | <i>Mol & Cell Proteomics 2004;3:66-72</i> |
| Hematuria Assessment | It is requested in every condition presenting rbdomyolysis and myoglobinuria | |
| Hemodynamic Assessment | It is requested in every condition which could compromise the renal function | |
| HF Guidelines | Heapatocyte Growth Factor. Serum hepatocyte growth factor levels predict long-term clinical outcome after percutaneous coronary revascularization | <i>Circulation 2001;04:2996-3007</i> |
| HFHC Diet | High Fat and High Cholesterol Diet | |
| HGF | Heapatocyte Growth Factor | <i>EHJ 2005 26(22):2387-2395</i> |
| HI | Hemorrhagic infarction | |
| HIF | Hypoxia-inducible transcription factors (HIF) -1 and -2: oxygen-regulated -subunits of two principal mediators of adaptation to critically low oxygen levels. Hypoxia-inducible factor-1 (HIF-1) is a heterodimeric peptide that is a key regulator of genes | <i>Arth & Rheum 2004;50, 10-23</i> |
| HLP | Hyperlipoproteinemia | |
| HM | Human Macrophages | |
| hnRNP | heterogeneous nuclear RiboNucleoProtein | |
| HOMA-IR | Insulin resistance by the homeostasis model of assessment | |
| Homocysteine | An amino acid (one of the building blocks that makes up a protein normally found in small amounts in the blood). Although increased total Hcy is an independent modifiable risk factor for cardiovascular disease, complications of pregnancy (preeclampsia and neural tube defects), cognitive dysfunction (dementia and Alzheimer disease), and hip fracture due to osteoporosis, there is considerable controversy surrounding the role of homocysteine in the development of these diverse pathologies.Is homocysteine a mediator of disease, or is it merely a marker of the disease process? | <i>Am J Pathol 1969;56:111-28. Clin Chem 2009; 55: 1742 - 1743</i> |
| HP | Hydroxyproline | |
| HRs | Hazard ratios | |
| HS | Hemorrhagic Stroke | |
| hsCRP | high-sensitivity C-Reactive Protein | |
| HT | Hemorrhagic Transformation | |
| HTA | Health Technology Assessment | |

| Definition | Description | References |
|--------------|--|---|
| HTN | Hypertension | |
| HTS | High Throughput Screening | |
| HUPO | Human Proteome Organization | <i>Nature Biotech 2006;24:333-8</i> |
| HUPO PPP | Human Proteome Organization Plasma Proteome Project | |
| HUVECs | Human Umbilical vein endothelial cells | |
| hVSMC | Human Vascular Smooth Muscle Cell | |
| hyperemia | An increase in the quantity of blood flow to a body part | |
| Hypertension | A multifactorial disease where the major mechanisms are identifying different clinical features: increased adrenergic drive in young adults; high renin hypertension as seen in renal dysfunction; low renin hypertension as in raised aldosterone concentrations; increased peripheral vascular resistance (PVR) in elderly | |
| I.S. | Ischemic stroke | |
| I.T. | Information Technology | |
| IB | Integrated Biomarkers | <i>JIM 2007; 261 (3): 214-34</i> |
| ICAM-1 | Intercellular Adhesion Molecule - 1 (ICAM-1, CD54) is a trans membrane glycoprotein molecule of the immunoglobulin super family. Each molecule is characterized by five distinct immunoglobulin-like domains, a trans membrane domain, and a cytoplasmic tail | <i>J Mol Med1996; 74:13-33</i> |
| ICD | Implantable Cardioverter Device | |
| ICER | Incremental Cost Effectiveness Ratio. It is defined as the ratio of the change in costs of a therapeutic intervention (compared to the alternative, such as doing nothing or using the best available alternative treatment) to the change in effects of the intervention. An Incremental Cost Effectiveness Ratio is calculated as cost/benefit of the outcome between several procedures or therapies where the USPHS (United States Public Health Service) has defined a goal toward economic efficiency set at <\$50,000 per life year saved | |
| IDF | International Diabetes Federation | |
| IDL | Intermediate-Density Lipoproteins - IDL are a class of lipoproteins formed from the degradation of very low density lipoproteins, constituted essentially of triacylglycerols and cholesterol esters. They are cleared from the plasma into the liver by receptor-mediated endocytosis, or further degraded to form low density lipoproteins. They are usually 25 to 35 nm in diameter | |
| IFCC | International Federation of Clinical Chemistry and Laboratory Medicine | |
| IFG | impaired fasting glucose (IFG) to classify individuals as having "prediabetes", and initially (34) suggested that individuals with a fasting plasma glucose concentration between 110 and 125 mg/dL (6.1–6.9 mmol/L) merited that designation. Because a fasting glucose >126 mg/dL (7.0 mmol/L) is diagnostic of diabetes, it seems likely that the selection of IFG by the ATP III to aid in the diagnosis of the metabolic syndrome stemmed from the creation of this new diagnostic criterion by the ADA (americandiabetes Association). Although there is substantial epidemiologic evidence that the higher the plasma glucose concentration, the more likely an individual is to develop type 2 diabetes, it is not as clear that the use of IFG provides a particularly effective way to identify either the presence of insulin resistance or to predict CVD risk. | <i>Diabetes Care 1997;20:1183–97</i> <i>Clin Chem 2005; 51: 931-38</i> |
| IFN gamma | Interferon gamma | |
| IGF | Insulin- like Growth Factor | <i>Clin Chem 2008; 54: 550 - 558</i> |
| IGT | Impaired Glucose Tolerance. The sensitivity of identifying insulin-resistant individuals can be increased essentially three fold by measuring plasma glucose concentration after an oral glucose load and using the ADA diagnostic criterion for impaired glucose tolerance [IGT = plasma glucose concentration of 140–199 mg/dL (7.8–11.0 mmol/L) 120 min after a 75-g oral challenge]. Furthermore, ca 25% of those in the most insulin-resistant tertile did not have prediabetes as | <i>Clin Chem 2005; 51: 931-38</i> |

| Definition | Description | References |
|-----------------------|--|---|
| | defined by IFG or GT | |
| IHD | Ischemic Heart Disease | |
| II | Index of Individuality (II) used to evaluate the clinical utility of conventional reference values for an analyte $II = CV_i / CV_g$ | |
| IL- 6 | see Interleukines | |
| <i>ILLUSTRATE</i> | <i>Investigation of Lipid Level Management Using Coronary Ultrasound to Assess Reduction of Atherosclerosis</i> | <i>NEJM 2007;356:1304-16</i> |
| ILOD | Intracranial Large-artery Occlusive Disease | |
| IMA | Ischemia Modified Albumin - IMA has been proposed as highly sensitive for the diagnosis of myocardial ischemia in patients. It has measured by Albumin Cobalt Binding (ACB) test | <i>Eur J Biochem 2001;268:42-7</i> |
| Imaging | Imaging Methodology: any method used to produce a picture of internal body structures using x-rays, magnetic resonance, ultrasounds, nuclear tracers, and scintigraphy, etc. See: Bioimaging Markers | |
| Imaging reporter | A molecular imaging agent can consists of two components: a) a detection moiety: radioisotope, magnetic compound, fluorochrome, sonic enhancer; b) a ligand specific for a molecule or cell: antibody, peptide, the combination can target some biomarkers in tissues or cells | <i>JACC 2006;47:1328-38</i> |
| IMI | Innovative Medicine Initiative | |
| Imprecision | Closeness of agreement between independent results obtained under the same stipulated conditions. See also precision and random error | |
| <i>IMPROVE Study</i> | <i>Carotid Intima Media Thickness (IMT) and IMT-Progression as Predictors of Vascular Events in a High Risk European Population</i> | <i>Atherosclerosis 2006;7(3):42</i> |
| IMT | Intima Media Thickness- IMT. See carotid Intima Media Thickness - CIMT is a well-established measure for assessing the cardiovascular risk, the extent of atherosclerosis and end-organ damage. Carotid IMT has proved to be an independent risk factor for myocardial infarction and stroke | <i>Stroke 200;31:2426-30</i> <i>Art Thr vasc Biology 2002;22:317-22</i> <i>Atherosclerosis 2006;7(3):42</i> |
| Incidence | The number of new disease cases reported in a population over a certain period of time | |
| Independent Events | Two events are independent if the occurrence of one of the events gives us no information about whether or not the other event will occur; that is, the events have no influence on each other. In probability theory we say that two events, A and B, are independent if the probability that they both occur is equal to the product of the probabilities of the two individual events | |
| Indicator | 1. A measure used to determine, over time, performance of functions, processes, and outcomes. 2. A statistical value that provides an indication of the condition or direction over time of performance of a defined process or achievement of a defined outcome | |
| Infarct Related Edema | Contrast-enhanced magnetic resonance imaging detected infarct-related signal changes as early as 1 h after AMI in humans, whereas the sensitivity of edema-related signal changes was not sufficient during this very early stage | |
| Inflammation | Inflammation is the first response of the immune system to infection or irritation and may be referred to as the innate cascade. Inflammation is characterized by the following quintet: redness (rubor), heat (calor), swelling (tumor), pain (dolor) and dysfunction of the organs involved (functio laesa). The first four characteristics have been known since ancient times and are attributed to Celsius; functio laesa was added to the definition of inflammation by Rudolf Virchow in 1858 | |

| Definition | Description | References |
|-------------------------------|--|--|
| Inflammatory Cardiac Diseases | The hypothesis about physiopathology of the atherogenesis have evolved from the cholesterol theory of the 1950s and 1960s to the theory of endothelial injury in the 1970s and 1980s, and now into the concept that atherosclerosis is an inflammatory disease. In reality cholesterol, endothelial injury, and inflammation all play a role in atherogenesis: oxidized low-density lipoprotein triggers endothelial cells to stimulate the migration and activation of leukocytes within the vessel wall, which leads to an inflammatory response | |
| Inflammatory Markers | Coronary artery inflammation is involved in all stages of atherosclerotic plaque formation. Plaque rupture and erosions precipitate thrombosis in patients with acute myocardial infarction (AMI), unstable angina, stenosis, total vessel occlusion, and sudden death. The thin, fibrous cap overlying the lipid-rich core of unstable plaques contains inflammatory cells that include proteins such as fibrinogen and CRP, which are important determinants of plaque rupture. See also the Statement for Healthcare Professionals From the Centers for Disease Control and Prevention and the American Heart Association | |
| Information Technology | Information Technology | |
| Innovative Medicine | Innovative Medicine Initiative - IMI is the title of Project designed by the EFPIA and presented to the European Union to be included in the 7th Frame Program | www.efpia.org |
| INR | International Normalized Ratio (INR) - The accuracy of the Prothrombin Time (PT) is known to be very system-dependent. The World Health Organization has addressed this system variability problem by the establishment of primary and secondary international reference preparations of thromboplastin and the development of a statistical model for the calibration of thromboplastins to derive the International Sensitivity Index (ISI) and to equate all thromboplastins to the reference thromboplastin through the following equation: $INR = \frac{\text{patient PT}}{\text{mean normal PT}}^{ISI}$ | |
| INSERM | Institute National de la Santé et de la Recherche Médicale | |
| Integrated Biomarkers | Integration of Biochemical and Biomaging Diseases Markers | |
| INTEGRONICS | Use of multiplexed technologies in combination to obtain an integrated picture at the DNA, RNA, protein. Tissue, and pharmacological levels | www.genomicglossaries.com |
| INTERHEART | <i>A Global Case-Control Study of Risk Factors for Acute Myocardial Infarction</i> | <i>Lancet 2004;364:937-52</i> <i>Lancet 2006;368:647-58</i> |
| Interleukines IL-1 IL-7 | Interleukins are a group of cytokines that are expressed by white blood cells (leukocytes, hence the -leukin) as a means of communication (inter-). A list of interleukins with function: IL-1: (secreted by macrophages), induces acute phase reaction IL-2: (secreted by T cells) stimulates growth and differentiation of T cell response. IL-3: (secreted by T cells), stimulates bone marrow stem cells. IL-4: involved in proliferation of B cells, and the development of T cells and mast cells. Role in allergic responses. IL-5: role in stimulation of B cells, eosinophil production, IgA production IL-6: (secreted by macrophages) induces acute phase reaction IL-7: involved in B, T and NK cell survival, development and homeostasis | |

| Definition | Description | References |
|--------------------------------------|--|--|
| Interleukines (continuum) IL-8 IL-18 | IL-8: Neutrophil chemotaxis. IL-9: stimulates mast cells. IL-10: inhibits Th1 cytokine production. IL-11: acute phase protein production. IL-12: NK cell stimulation, Th1 cells induction. IL-13: Stimulates growth and differentiation of B-Cells, inhibits Th1 cells and the production of macrophage inflammatory cytokines. IL-17: Induces production of inflammatory cytokines. IL-18: Induces production of Interferon-Gamma (IFN γ) | |
| IPRs | Intellectual Property Rights | |
| IR-GRE CMR | Inversion recovery Gradient-Echo pulse sequences | <i>Radiology</i> 2001;218:215-23 |
| IRMM | Institute of Reference Materials and Measurements - EU | www.irmm.jrc.be |
| Ischemia | Decreased blood flow to an organ, usually due to constriction or obstruction of an artery | |
| Ischemic Dysfunction | Ischemia impact on viability of myocytes. To assess the viability and the effect of ischemia on Ventricular (Left or Right) Dysfunction combination of information is requested: from ECG, Radionuclide imaging, SPECT, PET, etc. | |
| ISH | Isolated Systolic Hypertension | |
| ISO standard | ISO 9000 standard is a generic code related to program of Total Quality Management - TQM | <i>ClinChem</i> 1996; 42: 1561-65 |
| ISS | Italian National Health Institute | |
| IVD | In vitro diagnostics | |
| IVUS | Catheter based Ultra Sound invasive technology, permits direct and real time imaging of internal arterial vascular wall . Intravascular Ultrasound: it has emerged as a more sensitive tool for the assessment of plaque severity and morphology | <i>Circulation</i> 2001;103: 604-616 <i>Circulation</i> 2006;113:2936-42 <i>Circulation</i> 2007;115:1851-57 |
| JUPITER | <i>Justification for the Use of statins in Primary prevention : an Intervention Trial Evaluating Rosuvastatin</i> | <i>Circulation</i> 2003;108:2292-7 |
| KAPS | <i>Kuopio Atherosclerosis Prevention Study</i> | <i>Circulation</i> 1995;92:1758-64 |
| LAB | The activity of LOX-1 ligand containing ApoB (LAB) might reflect atherogenicity of LDL better than measurements of oxidized lipids, oxidized LDL, and LDL. Zsee also LOX-1 | <i>Clin Chem</i> 2010; 56: 550 - 558 |
| Label | Written material and instructions that accompany the medical test. Labeling includes the writing on the outside of the box as well as instructions packaged with the test | |
| LAD | Left Anterior Descending Artery | |
| LC-MS | Liquid Chromatography-Mass Spectrometry | |
| LCX | Left Circumflex Coronary Artery | |
| LDA | Linear Discriminant Analysis to analyze the predictive performance of conventional statistics | |
| LDL | Low-density lipoprotein (LDL) refers to a class and range of lipoprotein particles, varying somewhat in their size and contents, which carry cholesterol in the blood and around the body, for use by various cells. It is the final stage of VLDL (very low-density lipoprotein) which is produced by the liver. The LDL contains the apoprotein B-100 (Apo B-100) among is plasma lipids. Links: sdLDL, large buoyant LDL | |
| LDL-C | Cholesterol linked to the LDL | |

| Definition | Description | References |
|---|--|--|
| Leptin | Leptin: a hormone that has a central role in fat metabolism. Leptin was originally thought to be a signal to lose weight but it may, instead, be a signal to the brain that there is fat on the body. Hugely obese children have been found who have an inability to lose weight due to a genetic inability to produce leptin. Injections of leptin have had dramatic weight loss effects. It appears that, if one cannot make leptin, the brain thinks there is no fat and spurs the person on to eat more and more in a futile effort to get the leptin signal that fat is present. However, the effect of leptin on people who are obese can make leptin normally appears to be different. It regulates appetite and energy expenditure and plays a role in the limitation of the adipose tissue accumulation and obesity related complications | <i>Webster's New World™ Medical Dictionary 2nd Edition 2003</i> <i>Clin Chem 2004; 50: 1511 - 1525</i> |
| Leukoaraiosis | Refers to bilateral and either a patchy or diffuse areas of hypodensity of the cerebral white matter (WM) on CT or hypersensitivity on T2-weighted MRI: probably it is caused by chronic cerebral ischemia | <i>Stroke 2002;33:45-50</i> |
| LGE CMR | Late Gadolinium Enhancement in CMR (can indicate irreversible myocardial injury) | <i>JACC 2005;345:1815-22</i> <i>Circulation 2006;113:405-13</i> |
| Likelihood Functions | Functions constructed from a statistical model and a set of observed data which give the probability of that data for various values of the unknown model parameters. Those parameter values that maximize the probability are the maximum likelihood estimates of the parameters | |
| Likelihood Ratio | Linear discriminant analysis: is the likelihood that a given test result would be expected in a patient with the target disorder compared to the likelihood that the same result would be expected in a patient without that disorder. Likelihood Ratio (test positive) = sensitivity/ (1-specificity). Likelihood ratio (test negative)= (1-sensitivity/specificity) | |
| Limit of detection | LoD: the smallest amount of an analyte that can be detected within a established confidence level | |
| Lipid Infiltration | Infiltration of Lipids in the vessel wall and in the plaque | |
| Lipid Modified Protein | The structural modification of peptides and lipids in the double layer of the cell membranes | |
| Lipoprotein | A lipid surrounded by a protein; the protein makes it so the lipid is soluble (can be dissolved) in the blood. Forms: High-density Lipoprotein (HDL) - HDL helps protect against heart disease by promoting cholesterol breakdown and removal from the blood; hence, its nickname "good cholesterol". Low-density Lipoprotein (LDL) - The body's primary cholesterol-carrying molecule. High blood levels of LDL increase a person's risk of heart disease by promoting cholesterol attachment and accumulation in blood vessels; hence, the popular nickname "bad cholesterol". Adj: atherogenic Lipoproteins, anti-atherogenic Lipoproteins | |
| Lipoprotein (a) | Lp(a) consists of a particle of low-density lipoprotein cholesterol (LDL-C) linked by a disulfide bond to a large hepatically derived glycoprotein, apolipoprotein(a), which is structurally similar to plasminogen. In theory, then, Lp(a) could promote cardiovascular disease in two ways: its apolipoprotein(a) moiety could promote thrombogenesis and its LDL-C moiety could promote atherogenesis | <i>Biochem Biophys Res Commun 1993;191:1192-6.</i> <i>Clin Chem 2000;46:1956-67</i> <i>Clin Chem 2007; 53: 1298 - 1305</i> |
| Lipoprotein-Associated Phospholipase A2 | Lipoprotein-Associated (or Related) Phospholipase A2 - Lp-PLA2, an enzyme involved in the metabolism of oxidized phospholipids, is considered associated with coronary artery endothelial dysfunction | <i>Arterioscl Thromb Vasc Bio 2006;26:1586-93</i> |
| Liver Cirrhosis | Cirrhosis of the liver is a chronic, diffuse degenerative disease in which the parenchyma deteriorates; the lobules are infiltrated with fat and structurally altered; dense perilobular connective tissue forms; and often areas of regeneration develop. As the cirrhotic process continues, blood flow through the liver becomes blocked; portal hypertension may occur | |
| Logistic Regression | A multivariable prediction model in which the log of the odds of a time-fixed outcome event is related to a linear equation | |

| Definition | Description | References |
|--------------------------|---|--------------------------------------|
| LOX Index | Lectin-like oxidized LDL receptor 1 (LOX-1) is the receptor for oxidized LDL identified in endothelial cells. Activation of LOX-1 in endothelial cells induces various changes relevant to endothelial dysfunction, e.g., superoxide generation, reduction in the release of nitric oxide, and induction of the expression of monocyte chemoattractant protein 1 (MCP-1) and adhesion molecules. In addition to oxidized LDL, LOX-1 binds various ligands, e.g., apoptotic cells, activated platelets, leukocytes, and C-reactive protein. Accumulating evidence suggests that LOX-1 is involved in endothelial dysfunction, inflammation, atherogenesis, myocardial infarction, and intimal thickening after balloon catheter injury. The activity of LOX-1 ligand containing ApoB (LAB) might reflect atherogenicity of LDL better than measurements of oxidized lipids, oxidized LDL, and LDL. Serum concentrations of soluble LOX-1 (sLOX-1), which is released from the cell surface by proteolysis of LOX-1, might be a useful biomarker for the diagnosis of acute coronary syndrome. Accordingly the product of LAB and sLOX-1, here designated "LOX index," might be an even better marker reflecting the interaction of atherogenic lipoproteins and their receptors. | <i>Clin Chem</i> 2010; 56: 550 - 558 |
| Lp(a) | see Lipoprotein (a) | |
| LpAI | Lipoprotein AI subclasses | <i>J Lipid Res</i> 1996;37:2461-9 |
| LP-PLA2 | Lipoprotein associated phospholipase A2 | |
| LR | Logistic regression | |
| LURIC | Ludwigshafen Risk in Cardiovascular Health study: LpPLA2 activity may predict risk for 5-year cardiac mortality independently | <i>Clin Chem</i> 2007;53:1440-7 |
| LV | Left Ventricle. Links: LV function, LV remodeling, LV dysfunction: systolic, diastolic, end-diastolic diameter, LV filling pressure | |
| LV - MI | Left Ventricular Mass Index (Echocardiography) | |
| LVEDD | Left Ventricular End Diastolic Diameter | |
| LVEF | Left Ventricular Ejection Fraction | |
| LVH | Left Ventricular Hypertrophie | |
| MAC | Mytral Annulus Calcification | |
| MACE | Major Adverse Cardiovascular Events | |
| Macrophages | Macrophages play a role in acute destabilization and thrombus formation. They secrete proteases that digest the matrix and weaken the protective fibrous cap covering the atheromatous core, and they release in the plaque large amount of tissue factors that accelerate thrombus formation following plaque rupture. <i>See nanoparticulate contrast agent for computed tomography</i> | <i>Nature</i> 2002; 420: 868-74 |
| MALDI-MS | Matrix Assisted Laser Desorption-Mass Spectrometry | |
| Management by Objectives | A system in which specific performance objectives are jointly determined by subordinates and their superiors, progress towards objectives is periodically reviewed, end results are evaluated and rewards are allocated on the basis of this progress | |
| Marginal Analysis | A planning technique that assesses the incremental costs or revenues of a decision | |
| Marginal Cost | Cost incurred from manufacturing or providing each additional unit; includes normal profit | |
| Marker | Adj: Predictive Marker, Potential Marker, Disease Marker, Cardiac Marker, Tumors Markers. Links: Marker of inflammation, Marker of disease activity, Myocardial Ischemia, Marker of Cardiovascular Risk, Patient Risk Assessment, Patient Screening, Prognostic Monitoring, Biomarkers, Bioimaging Markers, Biochemical Markers, Integrated Biomarkers | |

| Definition | Description | References |
|---------------------------|--|--|
| Matched Samples | a) Two samples in which the members are clearly paired, or are matched explicitly by the researcher. b) Those samples in which the same attribute, or variable, is measured twice on each subject, under different circumstances. Commonly called repeated measures. Sometimes, the difference in the value of the measurement of interest for each matched pair is calculated, for example, between before and after measurements, and these figures then form a single sample for an appropriate statistical analysis | |
| Matched-Pair Analysis | A type of analysis in which subjects in a study group and a comparison group are made comparable with respect to extraneous factors by individually pairing study subjects with the comparison group subjects (e.g., age-matched controls) | |
| Matrix Metalloproteinases | MMPs are a family of Zn ⁺⁺ and Ca ⁺⁺ dependent endopeptidases, which are key mediators of the normal ECM remodeling that takes place during development, tissue morphogenesis and repair. The MMP family consists of at least 28 members that degrade at least one component of the ECM, although substrate specificity frequently is not restricted to only one ECM protein. On the basis of substrate specificity, sequence similarity, and domain organization, MMPs can be divided into subgroups: collagenases, gelatinases, stromelysins, and matrilysins which are secreted mostly as latent precursors (zymogens) that are proteolytically activated in the extracellular space, and a group of membrane-type MMPs (MT-MMPs) characterized by a transmembrane domain or a glycosylphosphatidylinositol-anchor. Tissue distribution of MMPs varies widely: some are constitutively synthesized (e.g. MMP-2) by many cells, while others are synthesized mainly upon stimulation (e.g. collagenases) | <i>Thrombosis and Haemostasis, 2005, 93:751-760</i> |
| MCA | Middle Cerebral Artery | |
| MCAF | Monocyte Chemotactic and Activating Factor | <i>Jo Mol Cell Card 1997;29(5):419-23</i> |
| MCP-1 Adhesion Molecules | Monocyte Chemoattractant Protein -1 (MCP-1). It regulates migration and infiltration of monocytes/macrophages. | <i>Curr Ather Rep 2001;3:243-51</i> <i>PLOS November 2009 4 (11) e7659 – e7669</i> |
| Meningitis | Inflammation of the meninges | |
| MESA | <i>Multi-Ethnic Study of Atherosclerosis</i> | |
| Meta-analysis | It is an overview which uses quantitative methods to summarize the results | |
| Metabolomics | The study of the metabolites profile in biological sample Quantitative measurement of multiparametric metabolic response of living systems to pathophysiologic modifications | <i>Xenobiotica 1999;29:1181-89</i> www.genomicglossaries.com |
| Metalloproteinases | The Metalloproteinases may be one of the older classes of proteinases and are found in bacteria, fungi as well as in higher organisms. They differ widely in their sequences and their structures but the great majority of enzymes contain a zinc atom which is catalytically active. In some cases, zinc may be replaced by another metal such as cobalt or nickel without loss of the activity. See also: Matrix metallo-proteinases - MMPs | <i>Oncogene 2006;25:5648-55</i> |
| METs | Metabolic equivalents - 1 MET is equivalent to a metabolic rate consuming 3.5 milliliters of oxygen per kilogram of body weight per minute. Or 1 MET is equivalent to a metabolic rate consuming 1 kilocalorie per kilogram of body weight per hour | |
| MHC | Major Histocompatibility Complex | |
| MIC | | |
| MIP-1a/b | Macrophage Inflammatory protein MIP-1a/b: regulates leukocyte activation and trafficking | <i>J Inf Dis 1999;179:136–41</i> |
| MIRACL | <i>Myocardial Ischemia Reduction with Aggressive Cholesterol Lowering</i> | |

| Definition | Description | References |
|--------------------------------|--|---|
| Mitral deceleration time | Time from early peak mitral flow velocity to zero line Doppler shift | |
| Mitral Regurgitation | Failure of the mitral valve to close properly, causing blood to flow back into the heart's upper left chamber (the left atrium) instead of moving forward into the lower left chamber | |
| Mitral Stenosis | A narrowing of the mitral valve, which controls blood flow from the heart's upper left chamber (the left atrium) to its lower left chamber (the left ventricle). May result from an inherited (congenital) problem or from rheumatic fever | |
| Mitral valve | The structure that controls blood flow between the heart's left atrium left atrium (upper chamber) and left ventricle ventricle (lower chamber). | |
| MLD | Minimum Lumen Diameter, reference diameter, percent diameter stenosis, and stenosis length, automatically calculated by computer software in IVUS | <i>Circulation 1993;87(sII):38-47</i> |
| mm Hg | An abbreviation for millimeters of mercury. Blood pressure is measured in units of mm Hg—how high the pressure inside the arteries would be able to raise a column of mercury | |
| MMP | Matrix Metalloproteinase | |
| MMP-2 and -9 | Gelatinases, such as the 72-kDa gelatinase A (MMP-2) and the 92-kDa gelatinase B (MMP-9) are abundantly expressed in various malignant tumors. MMP-9 knockout (KO) mouse models display reduced skin or pancreatic carcinogenesis, consequent to a delayed neovascularization, and a reduction in MMP-2 expression decreases angiogenesis and tumor progression | <i>Thrombosis and Haemostasis, 2005, 93:751-760</i> |
| MMP-9 | MMP-9 production is increased in arteries in both stable and unstable angina, whereas in normal arteries it is not expressed. Macrophages and smooth muscle cells (SMC) have been determined to be the major source of 92-kDa gelatinase whose production is stimulated by proinflammatory cytokines both in human monocyte-derived macrophages and in human SMC. See also TIMPs | <i>Thrombosis and Haemostasis, 2005, 93:751-760</i> |
| MMT | Multiple Biomarker Testing | |
| Model chi-square | Represents the amount of the relationship between the variables that remain unexplained by a model; the larger the value, the poorer the model fits the data | |
| MONICA | Monitoring trends and determinants in Cardiovascular disease | <i>Circulation 1999;99:237-44</i> |
| Monocyte | | |
| Monounsaturated fats | A type of fat found in many foods but mainly in avocados and in canola, olive, and peanut oils. Monounsaturated fat tends to lower LDL cholesterol levels, and some studies suggest that it may do so without also lowering HDL cholesterol levels | |
| Morbidity | In epidemiology, the morbidity rate is a ratio that measures the incidence and prevalence of a specific disease. Within the framework of a given time period (typically, but not necessarily, one year) it gives the number of people who are afflicted with that disease per unit of population. It is usually expressed as a number of people afflicted per 1,000, 10,000, or 100,000 people | |
| Mortality | The total number of deaths from a given disease in a population during an interval of time, usually a year | |
| Motion Abnormalities (Cardiac) | Tissue Doppler imaging (TDI) is a non-invasive ultrasound technique that enables quantitative assessment of regional myocardial wall motion. PET imaging with ¹³ NH ₃ to assess blood flow and ¹⁸ FDG to assess the metabolic viability of the myocardium is an accurate method of predicting potential reversibility of wall-motion abnormalities after surgical revascularization | |
| MPO | Myeloperoxidase | |

| Definition | Description | References |
|-----------------------|---|--|
| MRA | Multiple Regression Analysis and Magnetic Resonance Angiography | |
| MRA | Magnetic Resonance Angiography | |
| MRFIT | <i>Multiple Risk factor Intervention</i> | <i>Am J Epidemiol 1996;144:537-47</i> |
| MRI | Magnetic Resonance Imaging: A technique that produces images of the heart and other body structures by measuring the response of certain elements (such as hydrogen) in the body to a magnetic field. When stimulated by radio waves, the elements emit distinctive signals in a magnetic field. MRI can produce detailed pictures of the heart and its various structures without the need to inject a dye | |
| MRI sequences | T2-weighted turbo spin echo edema sensitive. T1 for capillary leakage. T1 weighted late enhancement | |
| MR-proANP | Mid-Region pro Atrial Natriuretic Peptide | |
| MRS | Magnetic Resonance Spectroscopy | |
| MS | Metabolic Syndrome | |
| MSCT | Multi Slice Computed Tomography | |
| MS-MS | Tandem Mass Spectrometry | |
| MTHFR | Methylenetetrahydrofolate reductase elevation of homocysteine levels can be due to a between 677CT point mutation in MTHFR gene: polymorphism are CC, CT and TT | <i>Am J Epidemiol 2000;151:862-77</i> |
| Multimarker analysis | Events which occur after a pathophysiological process that is characterized by the modification in plasma of the level of more than one marker, can be analyzed with the combination of the determination of multiple selected markers. In ACS, eg, the multimarker approach can evaluate several pathophysiological moments as plaque rupture, thrombosis, endothelial activation, inflammation, neurohormone activation, arrhythmias, ischemia, necrosis. <i>See also multivariate index</i> | <i>Biomarkers Med 2007;1:1-13</i> |
| Multimarker approach | Multimarker strategy that categorizes patients based on the number of elevated biomarkers at presentation allows risk stratification over a broad range of short- and long-term major cardiac events | <i>Circulation 2002;105:1760-3</i> |
| Multimarker panel | Medical diagnosis can be based on various clinical data (e.g., from imaging techniques, physical exams, and laboratory). Physicians combine these to arrive at a diagnostic conclusion. From that perspective multi-marker panels for diagnosis are intended to pre-aggregate some of the clinical data in an objective manner. It is tempting to advocate a straight probability interpretation | <i>Joint Statistic Meeting Salt Lake City, Utah 2007 Abstract - #309124</i> |
| Multimarkers score | $H = (1 \times \text{biomarker A}) + (2 \times \text{biomarker B}) + (3 \times \text{biomarker C})$, and so on, where 1, 2, and 3 denote the estimates of beta coefficients for biomarkers A, B, and C and were obtained by fitting the multivariable Cox model for the outcome of interest. Categorization according to quintiles of the multitasked score, with the lowest two quintiles labeled low risk, the third and fourth quintiles labeled intermediate risk, and the top quintile labeled high risk. Cumulative probability curves were constructed for subjects with low, intermediate, and high multimarker scores with the use of the Kaplan–Meier method | <i>NEJM 2006;355:2631-39</i> |
| Multiple biomarkers | Evaluation of the incremental usefulness of multiple biomarkers from distinct biologic pathways for predicting the risk of cardiovascular events | <i>NEJM 2006;355:2631-9</i> |
| Multivariate Analysis | A set of techniques used when variation in several variables has to be studied simultaneously. In statistics, multivariate analysis is interpreted as any analytic method that allows simultaneous study of two or more dependent variables | www.fda.gov/cdrh/oivd/guidance/1610.pdf |

| Definition | Description | References |
|----------------------------|---|--|
| Multivariate index | Test systems that employ data derived in part from one or more in vitro assays, and an algorithm that usually, but not necessarily, runs on software to generate a result that diagnoses disease or condition, or is used in the cure, mitigation, treatment or prevention of disease | |
| Multivariate Relative risk | An analysis where the effects of many variables are considered. Can select a subset of variables that significantly contribute to the variation in outcome Relative Risk = Event rate in treatment group divided by the event rate in the control group. Also known as risk ratio. RR is used in randomized trials and cohort studies. | |
| Multi-Vendor | to Define and combine multi-technology Solutions to address specific problems of Clients | |
| Murmur | Noises superimposed on normal heart sounds. They are caused by congenital defects or damaged heart valves that do not close properly and allow blood to leak back into the chamber from which it has come | |
| Myeloperoxidase | Myeloperoxidase - MPO or MPX is a hemoprotein stored in the granules of polymorphonuclear neutrophil and macrophages: lysosomal enzyme. MPO has been linked to the development of lipid-laden soft plaque, the activation of protease cascades affecting the stability and thrombogenicity of plaque, the production of cytotoxic and prothrombogenic oxidized lipids, and the consumption of nitric oxide, leading to vasoconstriction | <i>Clin Chem 2005;51(5) 810-24</i> <i>EJM 2003;349:1595-604</i> |
| Myocardial Functional | Myocardial Function, Capacity, Recovering | |
| Myocardial infarction | A heart attack. The damage or death of an area of the heart muscle (myocardium) resulting from a blocked blood supply to the area. The affected tissue dies, injuring the heart. Symptoms include prolonged, intensive chest pain and a decrease in blood pressure that often causes shock. Myocardial Injury | |
| Myocardial ischemia | A part of the heart muscle does not receive enough oxygen | |
| Myocarditis | A rare condition where the heart muscle becomes inflamed as a result of infection, toxic drug poisoning, or diseases like rheumatic fever, diphtheria, or tuberculosis. Active myocarditis can occasionally lead to sudden death, and 5-10% it may progress to develop chronic dilated cardiomyopathy | <i>Circulation 2004;109:1250-58</i> <i>Rheumatology 2006;45:iv32-iv38</i> |
| Myocardium | The muscular wall of the heart. It contracts to pump blood out of the heart and then relaxes as the heart refills with returning blood | |
| Myoglobin | As a cardiac biomarker myoglobin is used in conjunction with Troponin to help diagnose or rule out a heart attack. Myoglobin levels start to rise within 2-3 hours of a heart attack or other muscle injury, reach their highest levels within 8-12 hours, and generally fall back to normal within one day. Its advantage over other markers is that it turns positive sooner than troponin. However, myoglobin may come from either heart or skeletal muscle, so an increase in serum myoglobin is not specific for damage to the heart. Consequently, a negative myoglobin result effectively rules out a heart attack, but a positive result must be confirmed by testing for troponin. | |
| Myoma | A benign tumor composed of muscle tissue. It can occur in any organ also in the atrium | |
| Myosin Light Chain-I | Myosin light chain Isoform - (MLC-I) is a cardiac contractile protein with molecular mass of 22 kD. In severe CHF myofibrils may degenerate and subsequently the myofibrils component may be released in the circulation | |
| Nanoparticulate CT | Macrophages in atherosclerotic plaques of rabbits can be detected with CT scanner after injection of iodinated nanoparticles in contrast agent | <i>Nature Med 2007;13:636-41</i> |
| NCEP | National Cholesterol Education Program | |
| Necrosis | Death of tissue within a certain area | |
| Negative Predictive Value | Is the proportion of people with a negative test who are free of disease | |

| Definition | Description | References |
|------------------------|---|--|
| Neopterin | A pteridine derivative present in body fluids; elevated levels result from immune system activation, malignant disease, allograft rejection, and viral infections. | |
| NEP | Neuronal EndoPeptidase. See also DINE | <i>J Neuroch</i> 2004;1(4):956-64 |
| NFkB | Nuclear Factor (NF)-kappaB. Belongs to the Toll-like receptors (TLRs) family. It is a substrate of NFkB Kinase Activity, Enzyme activates DNA-binding activity of nfkb by directly phosphorylating its p65 and p50 subunits; does not phosphorylate ikb; may have a central role in mediating various signals to nfkb | |
| NHS | <i>Nurses' Health Study</i> | <i>NEJM</i> 2004;350:1387-97 |
| NICP | Non Ischemic Chest Pain | |
| NIEHS | National Institute of Environmental Health Sciences (US) | |
| NIHSS | National Institute of Health Stroke Score | |
| NINDS | National Institute of Neurological Disorders | |
| NIOR | Nutrient-Induced Insulin Output Ratio | |
| NIRF | Near Infrared Fluorophores | |
| NIST | National Institute of Standards and Technology - USA | www.nist.gov |
| NMR | Nuclear Magnetic Resonance | |
| NNAL | (Methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK*), a potent tobacco-specific nitrosamine formed from the nitrosation of nicotine, induces lung, liver, nasal cavity and exocrine pancreatic tumors in rodents and has been suggested to play a role in human tobacco-related cancers | <i>Carcinogenesis</i> 1996;17: 809-13 |
| NNT | Number Needed to Treat: is the number of patients who need to be treated to prevent one bad outcome. It is the inverse of the Absolute Risk Reduction (ARR). | <i>Evidence Based Medicine Third Edition. Churchill Livingstone: Edinburgh, 2005</i> |
| NOBIS-II | <i>North Württemberg and Berlin Infarct Study II</i> | <i>Am J Cardiol</i> 2000;86:1371-4 |
| N-of-1 Trials | The patient undergoes pairs of treatment periods organized so that one period involves the use of the experimental treatment and one period involves the use of an alternate or placebo therapy. The patients and physician are blinded, if possible, and outcomes are monitored. Treatment periods are replicated until the clinician and patient are convinced that the treatments are definitely different or definitely not different. | |
| Non linearity | When small changes yield disproportionate effects not easily practicable. While the solutions of linear equations can in general be described as a superposition of other solutions of the same equation and this makes linear equations particularly easy to solve and reason about, nonlinear equations are more complex, and much harder to understand because of their lack of simple superposed solutions. For nonlinear equations the solutions to the equations do not in general form a vector space and cannot (in general) be superposed (added together) to produce new solutions. This makes solving the equations much harder than in linear systems | |
| Noninvasive procedures | Any diagnostic or treatment procedure in which no instrument enters the body | |
| Nonlinear Regression | Nonlinear regression aims to describe the relationship between a response variable and one or more explanatory variables in a non-linear fashion | |

| Definition | Description | References |
|---------------------------|---|---|
| Nonparametric statistics | A class of statistical methods applicable to a large set of probability distributions used to test for correlation, location, independence, etc. In most nonparametric statistical tests, the original scores or observations are replaced by another variable containing less information. An important class of nonparametric tests employs the ordinal properties of the data. Another class of tests uses information about whether an observation is above or below some fixed value such as the median, and a third class is based on the frequency of the occurrence of runs in the data | |
| Norepinephrine | A catecholamine hormone that functions as a neurotransmitter in the sympathetic nervous system, producing alpha-adrenergic (vasoconstriction) and beta(1)-adrenergic stimulation (increase myocardial contractility, heart rate, automaticity, and AV conduction), and beta(2)-adrenergic activity (peripheral vasodilation) | |
| Northern blotting | Northern blotting or Northern hybridization is a technique for detection of specific RNA sequences. Northern blotting was developed by James Alwine and George Stark at Stanford University and was named such by analogy to Southern blotting. Northern blotting involves the following steps: 1) Total cellular RNA or mRNA is size-separated by denaturing agarose gel electrophoresis, 2) The separated RNA is transferred onto a nylon membrane; 3) The RNA is then detected with isotopic or non-isotopic labeled complementary DNA or RNA probe | |
| NPV | Negative Predictive Value | |
| NSTEMI | Non ST segment elevation Myocardial Infarction | |
| NT-3 | Neurotrophin-3 NT-3 belongs to the family of BDNF brain-derived neurotrophic factor | <i>Cell 1994;77(4):503-12</i> |
| NT-proBNP | N-terminal Brain Natriuretic proPeptide Type B. See also BNP | |
| Number needed to Diagnose | Number of tests that need to be performed to gain a positive response for the presence of disease | <i>J Clin Path 1997;50:447-8</i> |
| NYHA | New York Heart Association | |
| Obesity | The condition of being significantly overweight. It is usually applied to a condition of 30 percent or more over ideal body weight. Obesity puts a strain on the heart and can increase the chance of developing high blood pressure and diabetes | |
| Occluded artery | An artery in which the blood flow has been impaired by a blockage | |
| Odds | Are a ratio of events to non-events. If the event rate for a disease is 0.1 (10 per cent), its nonevent rate is 0.9 and therefore its odds are 1:9, or 0.111. Note that this is not the same expression as the inverse of event rate | |
| Odds Ratio | Describes the odds of an experimental patient suffering an adverse event relative to a control patient | |
| OEF | Oxygen Extraction Fraction | |
| OJ | Orange Juice | |
| Omega-3 index | Proportion of EPA plus DHA among erythrocyte membrane fatty acids considered the unique risk factor of SCD | <i>Prev Med. 2004 Jul;39(1):212-20</i> |
| OPG | OsteoProteGerin also known as osteoclastogenesis inhibitory factor (OCIF), is a cytokine and a member of the tumor necrosis factor (TNF) receptor superfamily. It is a basic glycoprotein comprising 401 amino acid residues arranged into 7 structural domains. It is found as either a 60 kDa monomer or 120 kDa dimer linked by disulfide bonds. Osteoprotegerin inhibits the differentiation of macrophages into osteoclasts and also regulates the resorption of osteoclasts in vitro and in vivo. Osteoprotegerin production is stimulated in vivo by the female sex hormone estrogen | <i>Endocrinology 2001;142:5050-55 Arterioscl Thr Vasc Biol 2002; 22: 549-53</i> |
| OPUS | <i>Orbofiban in Patients with Unstable coronary Syndrome</i> | <i>Circulation 2000;102:149-156</i> |

| Definition | Description | References |
|-------------------------------|--|---|
| Osteopontin | Osteopontin - OPN, produced by osteoblasts is a calcium-binding glycosylated phosphoprotein with a high acidic amino acid content. It is involved in bone remodeling, tumor progression, inflammation and cell mediate immunity exerts a role in CVD, and atherosclerotic plaque | <i>J Clin Inv</i> 2003;112:147-9 <i>Proc Nat Ac Sci</i> 1997;94:9308-13 <i>Art Thr Vas Biol</i> 200;20:624-28 |
| Osteoprotegerin | Osteoprotegerin and its Ligand: A New Paradigm for Regulation of Osteoclastogenesis and Bone Resorption. Osteoprotegerin, a member of the tumor necrosis factor receptor superfamily, has pleiotropic effects on bone metabolism, endocrine function, and the immunessystem | <i>Cancer Cell International</i> 2009, 9:26 |
| Outcome | The result of the performance (or nonperformance) of a function(s) or process(es). Outcomes may be described as: immediate, intermediate or final, direct or indirect, intended or unintended. Outcomes in a logic model typically have an action word associated with them (eg, increased or improved) and represent the consequences of the activities and outputs. When referring to CVD, this is a term given to mean significant events – such as heart attacks, strokes or sudden death – measured within long-term, major clinical studies | |
| Overview | Is a systematic review and summary of the medical literature | |
| Oxidation | The process of combining oxygen with some other substance or a chemical change in which and atom loses electrons | |
| Oxidized LDL (Ox LDL) | The oxidative conversion of low-density lipoproteins (LDL) to oxidized low-density lipoproteins (oxidized LDL) is now considered to be a key event in the biological process that initiates and accelerates the development of the early atherosclerotic lesion. They can play a role in the transition from stable to vulnerable, unstable plaque stimulating MMP-1 and -9 expression in human endothelial cells and in macrophages | <i>Circulation</i> 1999;99:993-8 <i>Am Heart J</i> 2005;150:1007-14 |
| Pacemaker | A surgically implanted electronic device that helps regulate the heartbeat | |
| PAD | Peripheral Arterial Disease | |
| PAI-1 | Plasminogen Activator Inhibitor-1 | <i>J Med Chem</i> 2004;47:3491-4 |
| PAPP-A | Pregnancy Associated Plasma Protein-A is a high molecular mass (200 kDa) glycoprotein synthesized by syncytiotrophoblast. It has been reported to be an IGF dependent metalloproteinase, a proatherosclerotic molecule able to disrupte the integrity of atheroma's protective cap | <i>Proc Nat Acad Sci</i> 1999;96:3149-53 <i>NEJM</i> 2001;345:1022-29 |
| Paralysis | Loss of the ability to move muscles and feel in part of the body or the whole body. Paralysis may be temporary or permanent | |
| Patent ductus arteriosus | A congenital defect in which the opening between the aorta and the pulmonary artery does not close after birth | |
| Pattern Recognition Receptors | Pattern recognition receptors, or PRRs, are a class of proteins which are employed by the cells of the immune system to identify molecules common to microbial pathogens but not present in mammalian cells. They are key elements in innate immunity as well as influence the development of adaptative immunity. Among the molecules recognized by these PRRs are: lipopolysaccharide (LPS) of gram negative bacteria, peptidoglycans and lipotechoic acids from Gram positive bacteria, mannose residues, bacterial DNA, N-formylmethionine, viral double-stranded RNA and fungal glucans | <i>Nature Imm</i> 2000;1:398 - 401 <i>Clin Imm</i> 2005;115(1):33-7 |
| PAV | Percent Atheroma Volume | |
| PB19 | Parvo B19 Virus | |
| PBEF | Pre-B cell colony-Enhancingt Factor | <i>Am J Respir Crit Care Med.</i> 2005;171(4):361-70 |
| PCA | Posterior Cerebral Artery | |

| Definition | Description | References |
|---------------------------|---|---|
| PCI | Percutaneous Coronary Intervention - Any of the noninvasive procedures usually performed in the cardiac catheterization laboratory. Angioplasty is an example of a percutaneous coronary intervention. Also called a transcatheter intervention | |
| PE | Pulmonary Embolism | <i>Circulation</i> 2003;108:2191-94 <i>Circulation</i> 2005;112:1520-1 |
| PE algorithm | Echocardiography combined with NTPBNT and cTnT in PE | <i>Circulation</i> 2005;112:1573-79 |
| PEACE | <i>Prevention of Events with Angiotensin Converting Enzyme inhibition trial</i> | <i>Circulation</i> 2007;115:1528-36 |
| Perfusion | Cardiac Perfusion Scan is a test to estimate the amount of blood reaching the heart muscle during rest and exercise. This may also be called a thallium or technetium sestamibi (MiBi) scan. It is typically done to determine the cause of unexplained chest pain or to determine the location and amount of injured heart muscle after a heart attack | |
| Pericardial abnormalities | Congenital or acquired pericardial diseases: pathology | |
| pericardial disease | ESC guidelines on management of pericardial and perimyocardial diseases | <i>Herz</i> 2006;31:1-11 |
| Pericarditis | Inflammation of the outer membrane surrounding the heart. When pericarditis occurs, the amount of fluid between the two layers of the pericardium increases. This increased fluid presses on the heart and restricts its pumping action | |
| PET | Positron Emission Tomography. A test that uses information about the energy of certain elements in your body to show whether parts of the heart muscle are alive and working. A PET scan can also show if your heart is getting enough blood to keep the muscle healthy | |
| PH | Parenchymal Hematoma | |
| PHS | Physicians' Health Study | <i>NEJM</i> 1997;336:973-79 |
| PLGF | Placental growth factor: a type of vascular endothelial growth factor. , a member of the vascular endothelial growth factor (VEGF) family, has been found in several conditions associated with pathological angiogenesis. Placental growth factor is expressed not only in placental cells but also in many nonplacental cells including endothelial cells. The gene that encodes placental growth factor is in chromosome region 14q24-q31. Placental growth factor is a molecular marker for inflammation. PLGF possesses proatherogenic properties such proliferation and migration of endothelial cells, smooth muscle cells, and chemotactic activity of macrophages in atherosclerotic lesions, and upregulation of TNF-alfa. In patients with acute chest pain, a high blood level of placental growth factor predicts a poor prognosis | <i>Proc Nat Acad Sci</i> 1991;88:9267-71 <i>Blood</i> 2003;101(2): 560-67 <i>Circulation</i> 2005;111:2828-36 |
| PLAC I and II | <i>Pravastatin Limitation of Atherosclerosis in the Coronary Arteries [PLAC I] and Pravastatin, Lipids, and Atherosclerosis in the Carotid Arteries [PLAC II]</i> | <i>Am J Card</i> 1995;28;76(9):60C-63C |
| Plan-Do-Study-Act | Plan-Do-Study-Act (PDSA) cycle. A four-part method for discovering and correcting assignable causes to improve the quality of processes. Synonyms: Deming cycle; Shewhart cycle | |
| Plaque | A deposit of fatty (and other) substances in the inner lining of the artery wall; it is characteristic of atherosclerosis. Links: Plaque Components, Plaque Dysfunction, Plaque Sectional Area, vulnerable Plaque, popcorn plaque | <i>Nature Med</i> 2007;13:532-4 |

| Definition | Description | References |
|-----------------------------|--|---|
| Plasminogen | Plasminogen is the inactive precursor of plasmin, a potent serine protease involved in the dissolution of fibrin blood clots. Both hereditary and acquired forms of plasminogen deficiency have been described. These are usually associated with either a thrombotic or a hyperfibrinolytic condition. | |
| Platelet/Inhibition | Measurement of Platelet Inhibition | <i>Circulation</i> 200;103(21):2572-8 <i>JACC</i> 2006;47(3):541-6 |
| Platelets | Platelets or thrombocytes are small flat disks, which are produced by megakaryocytes. They adhere to exposed subendothelial collagen within seconds of injury to form a hemostatic plug. Low platelet counts predispose an animal to hemorrhage | |
| Plausibility (Biological) | The statistically significant association fits well with previously existing knowledge | |
| pCHO | Plasma Choline concentrations increase rapidly after stimulation of phospholipase D and the activation of cell surface receptors in coronary plaque destabilization and tissue ischemia | <i>BBA/Mol Cell Biol Lipids</i> 1999;1438:38-46 |
| POC | Proof of Concept | |
| POCT | Point of Care Testing | |
| PAPP-A | Pregnancy-Associated Plasma Protein A is a high molecular mass (200 kDA) glycoprotein synthesized by syncytiotrophoblast. It was reported to be an insulin-like growth factor (IGF)-dependent IGF-binding protein-4-specific metalloproteinase, potentially a proatherosclerotic molecule through its role in disrupting the integrity of the atheroma's protective cap | <i>Proc nat Acad Sci USA</i> 1999;96:3149-53 |
| PPR | Periodic Performance Review | |
| PPV | Positive Predictive Value (+PV) is the proportion of people with a positive test who have disease | |
| Precision | See Imprecision | |
| Predictive Value | The predictive value of a test is a measure (%) of the times that the value (positive or negative) is the true value | |
| Predictive Value Theory | The diagnostic value of a procedure is defined by its sensitivity, specificity, predictive value, and efficiency | |
| Pregnancy Outcome | Results of conception and ensuing pregnancy, including live birth, stillbirth, spontaneous abortion, induced abortion. The outcome may follow natural or artificial insemination or any of the various reproduction techniques, such as embryo transfer or fertilization in vitro | |
| Premarket application – PMA | For Class III medical devices and devices that employ novel methods of treatment and are not substantially equivalent to currently marketed medical devices, manufacturers must submit a Premarket Approval Application to the FDA. A PMA is much more complex and time-consuming to prepare than a 510(k). A PMA submission typically contains a significant quantity of clinical, animal testing, manufacturing, and other data, all of which the FDA carefully scrutinizes. After a PMA is submitted, the FDA usually assembles a scientific advisory panel to study the PMA. The panel, comprising physicians and other experts in fields relevant to the submission, may hold a public meeting during which the PMA is reviewed and discussed. After evaluating the data in the PMA, the panel will recommend to FDA that it be approved, approved with conditions, or not approved | |

| Definition | Description | References |
|----------------------------------|--|---|
| Premarket Approval | FDA's primary consideration in determining when a new IVD requires a PMA is the level of risk to patient health that information obtained from use of the IVD may have in the event of an erroneous test result. In this context, FDA seeks to understand whether the proposed new IVD will be used in a manner that will uniquely and substantively affect diagnostic or therapeutic interventions for a particular disease or condition | |
| Premarket Clearance | 510(k) Premarket Notification. Medical devices that are substantially similar to products already on the market can usually obtain FDA clearance via the agency's premarket notification process, known as a 510(k). This review process is required for a few class I devices, most Class II devices and some Class III devices. In a 510(k) filing, the FDA requires that medical device manufacturers provide information and data (which may include clinical data) demonstrating that the new device is substantially equivalent to previously marketed devices and does not raise any new questions with respect to safety or efficacy | |
| PREP | Potentially Redeemed Exposure Products | |
| Pre-test probability | Is the number of people who truly have the disease (a) as a proportion of those who tested positive (a+b) | |
| Prevalence | The total number of cases of a given disease that exist in a population at a specific time | |
| Prevention | Activities that prevent a natural phenomenon or a potential hazard from having harmful effects on either persons or property. Primary, secondary and tertiary. Primary prevention is an active assertive process of creating conditions and or personal attributes that promotes the well being of people. Secondary prevention is early detection and intervention to keep beginning problems from becoming more severe. Tertiary prevention is the effort to rehabilitate those affected with severe disorders and return them to the community | |
| PRIDE | <i>Pro-BNP Investigation of Dyspnea in the Emergency Department (PRIDE) Study</i> | <i>Am J Card 2005;95:948-54</i> |
| PRIME | <i>Prospective Epidemiological Study of Myocardial Infarction</i> | <i>Art Thr Vasc Biol 2003;23:1255-61</i> |
| pro MBP | Proform of Eosinophil Major Basic Protein (pro-MBP). The 23.8 kDa secreted pro-form of MBP is found in the placenta and serum of pregnant women | <i>J Biol Chem 2005;280: 9823-32</i> |
| Probability of Death | The cause of death must be defined for cause specific survival or probability of death using cause of death information. Cases that have died but do not fall in your defined definition of dead are considered to be censored at their time of death for net survival or died from other causes for crude probability of death | |
| PROCAM score | PROCAM (Prospective Cardiovascular Münster Study) Risk Score estimates the risk of suffering a heart attack | http://www.chd-taskforce.com/guidelines |
| Product of Activated Lymphocytes | Lymphokines, Monokines, found together with Colony-Stimulating Factor, Interferon-gamma, and human B cell growth factor in the supernatants from mitogen-stimulated and mixed lymphocyte cultures. | |
| Proteomics | The global and comprehensive study of proteins within cells, tissues, or biological fluids. There is an increase of information from DNA (30... genes) to RNA (100.000 transcripts) and proteins (300.000 molecular forms) | <i>E J Pharm 2005;527:1-22</i> <i>Exp Rev Proteomics 2006;3:409-26</i> |
| PROVE IT-TIMI 22 | <i>Pravastatin Or atorVastatin Evaluation Therapy Thrombolysis In Myocardial infarction</i> | <i>NEJM 2004 50(15):1495-1504</i> |

| Definition | Description | References |
|-----------------------|---|--|
| p-Selectin | P-selectin: 140kDa. It contains nine consensus repeats and extends approximately 40 nm from the endothelial surface. p-Selectin is expressed in alpha-granules of activated platelets and granules of endothelial cells. Within minutes of stimulation of the endothelial cells by inflammatory mediators such as histamine, thrombin, or phorbol esters, P-selectin is surface-expressed. Expression of P-selectin also occurs from the surgical trauma endured during preparation of the tissues for intravital microscopy. Increased sP-selectin concentrations are associate with Venous Thromboembolism | <i>EHJ 2003;24(24):2166-79</i> <i>Clin Chem 2007;53:1235-43</i> |
| PSR | Periodontal Screening and Recording: method of periodontal diagnosis | |
| PTCA | Percutaneous Transluminal Coronary Angioplasty | |
| PUFA | Polyunsaturated Fatty Acid | <i>Arter Thromb Vasc Biol 2007;27:1228-30</i> |
| Pulmonary | Referring to the lungs and respiratory system. Pulmonary embolism - A condition in which a blood clot that has formed elsewhere in the body travels to the lungs. Pulmonary primary hypertension. Pulmonary edema | |
| Pulmonary valve | The heart valve between the right ventricle and the pulmonary artery. It controls blood flow from the heart into the lungs | |
| PVA | Posterior Vertebral Artery | |
| PVC | Premature Ventricular Contraction - An early or extra heartbeat that happens when the heart's lower chambers (the ventricles) contract too soon, out of sequence with the normal heartbeat | |
| PVD | Peripheral Vascular Disease | |
| PWI | Perfusion Weighted Index in MRI | |
| QALY | Quality Adjusted Life Year | |
| QALY Utility Analysis | One form of cost-effectiveness analysis, cost-utility analysis, allows the comparison of different health outcomes (such as prolongation of life, prevention of blindness or relief of suffering) by measuring them all in terms of a single unit — the quality-adjusted life-year (QALY). To do this, any state of health or disability is assigned a utility on a scale ranging from 0 (immediate death) to 1 (a state of perfect health). The outcome of any health intervention can then be calculated as the product of the increase in utility that it may cause and the time in years over which it may be enjoyed. When allocating scarce resources, those interventions that are expected to produce fewer QALYs for any given cost are given a lower priority | |
| QCA | Quantitative Coronary Analysis: has been reference method for the angiographic assessment of CAD severity and progression | <i>Circulation 2007;115:1851-57</i> |
| QTc Interval | The QT interval represents the duration of ventricular depolarization and subsequent repolarization, beginning at the initiation of the QRS complex and ending where the T wave returns to isoelectric baseline. Because of its inverse relationship to heart rate, the QT interval is routinely transformed (normalized) by means of various formulae into a heart rate independent "corrected" value known as the QTc interval. The QTc interval is intended to represent the QT interval at a standardized heart rate of 60 bpm. A delay in cardiac repolarization creates an electrophysiological environment that favors the development of cardiac arrhythmias, most clearly torsade de pointes, but possibly other ventricular arrhythmias as well. While the degree of QT prolongation is recognized as an imperfect biomarker for proarrhythmic risk, there is a qualitative relationship between QT prolongation and the risk of TdP, especially for drugs that cause substantial prolongation of the QT/QTc interval | |
| Qualification | of Biomarkers: the evidentiary process linking a biomarker to disease biology or clinical outcome | <i>Circulation 2006; 113:2335-62</i> |

| Definition | Description | References |
|--------------------------------------|--|---|
| Quality Specifications | Quality assurance: all those planned and systematic actions necessary to provide adequate confidence that a product, process or service will satisfy given requirements for quality. Quality control: operational techniques and activities that are used to fulfill given requirements for quality | |
| RCV | Reference Change Value (RCV) (or "Critical Difference") Laboratory test results are affected by: Pre-analytical variation, Analytical variation, Within-subject (intra-individual) biological variation (CVI). All of these variations create random changes in laboratory test values. Random sources of variation create changes in laboratory test values that are Gaussian distributed. The dispersion of values obeying a Gaussian distribution is described by the standard deviation (SD). If data are skewed, log-transformation used to force Gaussian distribution. Sources of variation are additive as the variance (i.e., SD ² or CV ²) | <i>Clin Chem 2004;50:1118-25</i> |
| R&D | Research and Development | |
| Radionuclide imaging | A test in which a harmless radioactive substance is injected into the bloodstream to show information about blood flow through the arteries. Damaged or dead heart muscle can often be identified, as can serious narrowing in an artery | |
| Radionuclide studies | Any of the diagnostic tests in which a small amount of radioactive material is injected into the bloodstream. The material makes it possible for a special camera to take pictures of the heart | |
| Radionuclide ventriculography | A diagnostic test used to determine the size and shape of the heart's pumping chambers (the ventricles) | |
| RAGE | Receptor for Angiotensin-Converting Enzyme | |
| RANA | Rheumatoid Arthritis-associated Nuclear Antigen | |
| Randomised Controlled Clinical Trial | A group of patients is randomised into an experimental group and a control group. These groups are followed up for the variables / outcomes of interest | |
| RANTES | RANTES is an acronym for Regulated on Activation, Normal T Expressed and Secreted. A cytokine that is a member of the interleukin-8 super family of cytokines. RANTES is a protein. It is a selective attractant for memory T lymphocytes and monocytes. It binds to CCR5, a coreceptor of HIV. It is also known as CCL5. | <i>Webster's New World™ Medical Dictionary 2nd Edition 2003</i> |
| RCA | Right Coronary Artery | |
| RCV | Reference Change Value | |
| Recommendation | ESC Criteria for Recommendation for diagnostic and treatment options | <i>Herz 2006;31:1-11</i> |
| Reference Material | Defined material containing analytes and matrix corresponding to the analyte to be measured, certified as reference | |
| Reference Method | A well evaluated measurement procedure, accepted by consensus, able to give the higher sensitivity and specificity under specific clinical requirements | |

| Definition | Description | References |
|---------------------|---|---------------------------------------|
| Regression Analysis | A procedure for finding the mathematical function which best describes the relationship between a dependent variable and one or more independent variables. In linear regression (see LINEAR MODELS) the relationship is constrained to be a straight line and LEAST-SQUARES ANALYSIS is used to determine the best fit. In logistic regression (see LOGISTIC MODELS) the dependent variable is qualitative rather than continuously variable and LIKELIHOOD FUNCTIONS are used to find the best relationship. In MULTIPLE REGRESSION the dependent variable is considered to depend on more than a single independent variable | |
| Regulatory | In the context of government and public services regulation (as a process) is the control of something by rules, as opposed to its prohibition. In economics, it is part of the government relationship with markets, often seen as the opposite of deregulation. Regulatory Agency: the agency or government department that has responsibility over the legislation (acts and regulations) for a given sector of the government | |
| Regurgitation | Backward flow of blood through a defective heart valve | |
| Relative Frequency | Relative Frequency is another term for proportion; it is the value calculated by dividing the number of times an event occurs by the total number of times an experiment is carried out. The probability of an event can be thought of as its long-run relative frequency when the experiment is carried out many times. If an experiment is repeated n times, and event E occurs r times, then the relative frequency of the event E is defined to be: r/n | |
| Renin | Also known as angiotensinogenase, is a circulating enzyme released mainly by juxtaglomerular cells of the kidneys in response to low blood volume or decreased serum NaCl concentration | <i>J Clin Invest</i> 2004;114:805-812 |
| Resistin | Resistin is considered a hormone that potentially links obesity to diabetes. Adipocytes secrete a unique signalling molecule, named resistin (for resistance to insulin). Circulating resistin levels are decreased by the anti-diabetic drug rosiglitazone, and increased in diet-induced and genetic forms of obesity. Administration of anti-resistin antibody improves blood sugar and insulin action in mice with diet-induced obesity. Insulin-stimulated glucose uptake by adipocytes is enhanced by neutralization of resistin and is reduced by resistin treatment. | <i>Nature</i> 2001;409: 307-12 |
| Resource Allocation | In strategic planning, a resource-allocation decision is a plan for using available resources, especially in the near term, to achieve goals for the future. Or in other words, it is the process of allocating resources among the various projects or business units. The plan has two parts: (1) the basic allocation decision; and (2) contingency mechanisms. The basic allocation decision is the choice of which items to fund in the plan (and the level of funding) and which to leave unfunded: the resources are allocated to some items, not to others. There are two contingency mechanisms: (1) a priority ranking of items excluded from the plan, showing which items to fund if more resources should become available; (2) a priority ranking of some items included in the plan, showing which items should be sacrificed if total funding must be reduced | |
| Restenosis | The re-closing or re-narrowing of an artery after an interventional procedure such as angioplasty or stent placement | |
| RESTORE | <i>Randomized Efficacy Study of Tirofiban for Outcomes and Restenosis</i> | |
| Revascularization | A procedure to restore blood flow to the tissues. Coronary artery bypass surgery is an example of a revascularization procedure | |

| Definition | Description | References |
|-------------------------|--|--|
| Reynolds Risk Score | A clinical simplified algorithm with lower Bayes Information Criterion based in covariates Reynolds Risk Score. It is designed to predict women's risk of having a future heart attack, stroke, or other major heart disease in the next 10 years. | <i>JAMA 2007;297:611-18</i> |
| Rheumatic fever | A disease, usually occurring in childhood, that may follow a streptococcal infection. Symptoms may include fever, sore or swollen joints, skin rash, involuntary muscle twitching, and development of nodules under the skin. If the infection involves the heart, scars may form on heart valves, and the heart's outer lining may be damaged | |
| Rheumatic heart disease | A disease of the heart (mainly affecting the heart's valves) caused by rheumatic fever | <i>NEJM 2007;357:470-6</i> |
| <i>RHPP</i> | <i>Rural Health Promoting Study</i> | <i>Art Thr Vasc Biol 1997;17:1121-27</i> |
| Risk | Is the potential harm that may arise from some present process or from some future event. It is often mapped to the probability of some event which is seen as undesirable. Usually the probability of that event and some assessment of its expected harm must be combined into a believable scenario (an outcome) which combines the set of risk, regret and reward probabilities into an expected value for that outcome. | |
| Risk Assessment | A scientifically based process consisting of the following steps: (i) hazard identification, (ii) hazard characterization, (iii) exposure assessment, and (iv) risk characterization. Syn: Risk analysis, Risk diagnosis. Other: Risk recurrence | |
| Risk Factor | Risk Factor - RF: an element or condition involving a certain hazard or danger. When referring to heart and blood vessels, cardiovascular risk factor | |
| Risk Management | Clinical and administrative activities undertaken to identify, evaluate, and reduce the risk of injury to patients, staff, and visitors and the risk of loss to the organization itself | |
| Risk Marker | Statistically associated with a disease but not causally linked | <i>Circulation 2006;113:2335-62</i> |
| Risk Ratio | Is the ratio of risk in the treated group (EER) to the risk in the control group (CER): $RR = EER/CER$. RR is used in randomized trials and cohort studies | |
| Risk Simplification | A process consisting to simplify and combine three processes: Risk assessment, Risk management and Risk communication performed to understand the nature of unwanted, negative consequences to human and animal health, or the environment | |
| Risk Stratification | The known clinical risk factors allow physicians to classify patients into low, moderate, high or highest risk of developing a disease | |
| Risk/Benefit | Risk-benefit ratio is the comparison of the risk of a situation to its related benefits | |
| RIVA | RIVA Stenosis | |
| RM | Raphe Medianus | |
| ROC curve | Receiver Operating Characteristic curves are used to evaluate the results of a prediction, comparing sensitivity to 1- specificity | |
| Rois | Regions of interest (Rois) on the MRI images | <i>Stroke 2002;33:45-50</i> |
| ROS | Reactive oxygen species (ROS) are normally produced as a product of metabolism, and are highly reactive with surrounding biological components. The ability of ROS to damage DNA and other critical molecules underlies their reputation for causing deleterious cellular effects and their association with aging, carcinogenesis, and atherosclerosis | <i>J Phys Pharm 2003;54(4): 469-87</i> |

| Definition | Description | References |
|----------------|--|--|
| RR | Relative Risk: Event rate in treatment group divided by the event rate in the control group. Also known as risk ratio: ratio of observed incidences. RR is used in randomized trials and cohort studies. See also Absolute Risk | <i>Evidence Based Medicine Third Edition. Churchill Livingstone: Edinburgh, 2005</i> |
| RRR | Relative Risk Reduction: is the percent reduction in events in the treated group event rate (EER) compared to the control group event rate (CER): $RRR = (CER - EER) / CER * 100$ | <i>Evidence Based Medicine Third Edition. Churchill Livingstone: Edinburgh, 2005</i> |
| RT-PCR | Reverse Transcriptase Polymerase Chain Reaction | |
| RV | Right ventricular : function, valvular structures | |
| RWT | Relative Wall Thickness: the ratio between the observed value of midwall fractional shortening (mFS) and that predicted on the basis of the circumferential end-systolic stress (Echography) | |
| S-100B protein | The S-100B protein is released by injured astrocytes. After passage through a disintegrated blood-brain barrier (BBB) the molecule can be detected in the peripheral circulation | <i>Curr Med Chem 2006;13:3053-3060</i> |
| SAA | Serum Amyloid A. The serum amyloid A (SAA) family comprises a number of differentially expressed apolipoproteins, acute-phase SAAs (A-SAAs) and constitutive SAAs (C-SAAs). A-SAAs are major acute-phase reactants, the in vivo concentrations of which increase by as much as 1000-fold during inflammation | <i>Clin Chem 2007; 53: 1129 - 36</i> |
| Safety | Safety is the condition of being protected against failure, damage, error, accidents, or harm. Protection involves here both causing and exposure. See: Security | |
| SAH | Subarachnoid hemorrhages | |
| SBHW | <i>South Bay Heart Watch</i> | <i>Circulation. 1999;99:2610-12 JAMA 2004; 291: 210-15</i> |
| SBP | Systolic Blood Pressure | |
| SCD | Sudden Cardiac Death | |
| sCD40-L | Soluble CD40 Ligand is derived from activated platelets and has biological activity that can trigger an inflammatory reaction in vascular endothelial cells by the secretion of cytokines and chemokines. Membrane bound CD40L and sCD40L forms interact with the CD40 receptor molecule that is in B cells lymphocytes, monocytes, macrophages, endothelial and smooth muscle cells (in the last ones) leading to release of matrix MMPs and subsequent destabilization of the plaque | <i>Circ Res 2001;89:1092-103 Circulation 2002;106:896-9</i> |
| sCD40L | Soluble form of CD40 ligand. CD40 signaling in endothelial and smooth muscle cells, monocytes, and platelets promotes a wide array of proatherogenic and prothrombotic functions in vitro and in vivo | <i>Circulation 2003;108:1049</i> |
| SCORE score | Systematic Coronary Risk Evaluation is a scoring system for use in the clinical management of cardiovascular risk in European clinical practice | <i>euroscore.org</i> |
| SCUBA | Self-contained underwater breathing apparatus | |
| sdLDL | Small dense LDL particles, | |
| Security | Measures taken as a precaution against danger or injury. See: Safety | |
| SELDI | Surface-Enhanced Laser Desorption/Ionisation | |
| Sensitivity | It is the proportion of people with disease who have a positive test. Sensitivity of a test is the percentage of all patients' true positives of all diseased cases in the population | <i>J Proteomic Res 2005;4:1053-9</i> |

| Definition | Description | References |
|-------------------------|---|---|
| Sentinel event | An unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Serious injury specifically includes loss of limb or function. The phrase, "or the risk thereof" includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome. Such events are called "sentinel" because they signal the need for immediate investigation and response | |
| Serotonin | A hormone, also called 5-hydroxytryptamine, in the pineal gland, blood platelets, the digestive tract, and the brain. Serotonin acts both as a chemical messenger that transmits nerve signals between nerve cells and that causes blood vessels to narrow | <i>Webster's New World™ Medical Dictionary 2nd Edition 2003</i> |
| SHAPE | <i>(National) Screening for Heart Attack Prevention and Education Program</i> | <i>Am J Card 2006;98[suppl]:2H–15H)</i> |
| Shock | A condition in which body function is impaired because the volume of fluid circulating through the body is insufficient to maintain normal metabolism. This may be caused by blood loss or by a disturbance in the function of the circulatory system | |
| Shunt | A connector that allows blood to flow between two locations | |
| sICAM | Soluble forms of the intercellular adhesion molecule-1 (ICAM-1) during the pathogenesis of human Type I (insulin-dependent) diabetes mellitus | <i>Diabetologia 1998; 41: 1298-1303</i> |
| Sickness Impact Profile | A quality-of-life scale developed in the United States in 1972 as a measure of health status or dysfunction generated by a disease. It is a behaviorally based questionnaire for patients and addresses activities such as sleep and rest, mobility, recreation, home management, emotional behavior, social interaction, and the like. It measures the patient's perceived health status and is sensitive enough to detect changes or differences in health status occurring over time or between groups | |
| SIESTA | <i>Systemic Inflammation Evaluation in Patients with Non – ST segment</i> | <i>Rev Esp Card 2003;56(4):389-95</i> |
| Silent ischemia | Episodes of cardiac ischemia that are not accompanied by chest pain | |
| Sinus (SA) node | The "natural" pacemaker of the heart. The node is a group of specialized cells in the top of the right atrium which produces the electrical impulses that travel down to eventually reach the ventricular muscle, causing the heart to contract | |
| SIRM | Italian Society of Radiology | |
| SLpAI | Smallest Lipoprotein AI of molecular mass 42.000 - 70.000 | <i>Acta Biochim Pol 2005;52:515-25</i> |
| SMC | Smooth Muscle Cells. See Vascular Smooth Cells (VSM) | |
| SMEs | Small Medium Enterprises | |
| SnNout | When a sign/test has a high sensitivity, a negative result rules out the diagnosis; e.g. the sensitivity of a history of ankle swelling for diagnosing ascites is 92 per cent, therefore if a person does not have a history of ankle swelling, it is highly unlikely that the person has ascites | |

| Definition | Description | References |
|-----------------------|--|--|
| SNPs | Single Nucleotide Polymorphisms or SNPs are DNA sequence variations that occur when a single nucleotide (A, T, C, or G) in the genome sequence is altered. For a variation to be considered a SNP, it must occur in at least 1% of the population. SNPs, which make up about 90% of all human genetic variation, occur every 100 to 300 bases along the 3-billion-base human genome. Two of every three SNPs involve the replacement of cytosine (C) with thymine (T). SNPs can occur in both coding (gene) and noncoding regions of the genome. Many SNPs have no effect on cell function, but scientists believe others could predispose people to disease or influence their response to a drug | <i>Human genome Project Information.</i> www.genomics.gov |
| SNR CMR | Signal-to-Noise Ratio in CMR | |
| Southern Blotting | A Southern blot is a method routinely used to check for the presence of a DNA sequence in a DNA sample. It combines agarose gel electrophoresis for size separation of DNA with methods to transfer the size-separated DNA to a filter membrane for probe hybridization. The method is named after its inventor, the British biologist Edwin Southern. Other blotting methods (i.e., western blot, northern blot, southwestern blot) that employ similar principles, but using RNA or protein, have later been named in reference to Southern's name | <i>J Mol Biol 1975;98:503-517</i> |
| Specificity | Is the proportion of people free of a disease who have a negative test. Specificity of a test is the percentage of all patients true negative of all negative cases in the population | <i>J Proteomic Res 2005;4:1053-</i> |
| SPECT | Single Photon Emission Computerized Tomography | |
| sPLA2-II | Type II secretory Phospholipase A2: member of the phospholipase 2 family, expressed in macrophages, platelets, vascular SMCs, hepatocytes. It belongs to the group of acute phase reactant | <i>Circ Res 2001;89:298-304</i> |
| SpPin | When a sign/test has a high specificity, a Positive result rules in the diagnosis; e.g. the specificity of fluid wave for diagnosing ascites is 92 per cent. Therefore, if a person has a fluid wave, it is highly likely that the person has ascites | |
| SRA | Strategic Research Agenda | |
| SSFP | Steady-State Free Precession | |
| SSHs | Sex Steroid Hormones | |
| SSS | Sick Sinus Syndrome: the failure of the sinus node to regulate the heart's rhythm | |
| Standard Deviation | The positive square root of the sum of the squares of the deviations between the observations and the mean of the series, divided by one less than the total number in series | |
| Statins | Statins inhibit an enzyme called HMG-CoA reductase that controls the rate of cholesterol synthesis in the body. These drugs lower cholesterol by slowing down the hepatic synthesis of cholesterol thus increasing the liver's ability to remove the LDL-cholesterol already in the blood. | |
| Statistical Inference | Statistical Inference makes use of information from a sample to draw conclusions (inferences) about the population from which the sample was taken | |
| STEMI | Myocardial infarction with ST elevation | |
| Stenosis | The narrowing or constriction of an opening, such as a blood vessel or heart valve | |
| Stent | A device made of expandable, metal mesh that is placed (by using a balloon catheter) at the site of a narrowing artery. The stent is then expanded and left in place to keep the artery open | |
| Stress | Bodily or mental tension resulting from physical, chemical or emotional factors. Stress can refer to physical exertion as well as mental anxiety | |

| Definition | Description | References |
|-----------------------------|---|--|
| Stress Echo | The Stress Echo Test combines an echocardiogram (cardiac ultrasound) with a stress test to assess the performance of the heart at rest and under stress. Stress examples: Pharmacological (dipyridamol, dobutamine, adenosine) or exercise echocardiography | |
| Stroke | A sudden disruption of blood flow to the brain, either by a clot or a leak in a blood vessel. Forms: Ischemic stroke: a type of stroke that is caused by blockage in a blood vessel. Silent Stroke, Stroke Unit, Major, Minor (ms); infarct cerebral, ischemic, Hemorrhagic complication, Recanalization, Reperfusion, reocclusion | |
| Stroke Unit | Organized inpatient (stroke unit) care for stroke | |
| Subarachnoid hemorrhage | Bleeding from a blood vessel on the surface of the brain into the space between the brain and the skull | |
| Sudden death | Death that occurs unexpectedly and instantaneously or shortly after the onset of symptoms. The most common underlying reason for patients dying suddenly is cardiovascular disease, in particular coronary heart disease | |
| Superoxide | Superoxide is a reactive anion and free radical, formally O ₂ ⁻ . It has an unpaired electron, is not particularly stable, and spontaneously decomposes into peroxide and oxygen over time | |
| Surrogate endpoint | A biomarker intended to substitute for a clinical endpoint: it should predict clinical benefit, or harm, or lack of benefit or harm. An outcome measure that is used in place of a primary endpoint (outcome). Use of a surrogate is expected to predict the clinical outcome | <i>Clin Pharm Ther</i> 2001;69-89 <i>Health Affairs</i> 2005;24:67-78 |
| Surrogate endpoint approval | FDA may grant marketing approval for a biological product on the basis of adequate and well-controlled clinical trials establishing that the biological product has an effect on a surrogate endpoint. Under Subpart H, approval may be based on a surrogate endpoint or on an effect on clinical endpoint other than survival or irreversible morbidity ("Surrogate") (21 CFR 314.510) or a product may be approved with restrictions to assure safe use ("Restricted") (21 CFR 314.520) | <i>Stat Med</i> 1989;8:431-40 http://www.fda.gov/cder/rdmt/accappr1.htm |
| Surveillance | Ongoing monitoring using methods distinguished by their practicability, uniformity, and rapidity, rather than by complete accuracy. The purpose of surveillance is to detect changes in trend or distribution to initiate investigative or control measures. Active surveillance is systematic and involves review of each case within a defined time frame. Passive surveillance is not systematic. Cases may be reported through written incident reports, verbal accounts, electronic transmission, or telephone hotlines, for example | |
| Syncope | A temporary, insufficient blood supply to the brain which causes a loss of consciousness. Usually caused by a serious arrhythmia | |
| Sindrome X | Condition where patients without evidence of obstructive atherosclerotic plaque and myocardial diseases may present with angina-like chest pain: in a subgroup of such patients the appropriate diagnosis is microvascular angina | <i>NEJM</i> 2007;356:830-40 |
| Systolic dysfunction | Regional or global systolic dysfunction of the left ventricle | |
| T1DM and T2DM | Type 1 and Type 2 Diabetes Mellitus | |
| T2 SI | T2 myocardial signal intensity | |
| Tachycardia | Accelerated beating of the heart. Paroxysmal tachycardia is a particular form of rapid heart action, occurring in seizures that may last from a few seconds to several days | |
| TACTICS-TIMI 18 | <i>Treat Angina with Aggrastat and Determine Cost of Therapy with an Invasive or Conservative Strategy: Thrombolysis In Myocardial Infarction 18</i> | <i>NEJM</i> 2001;344:1879-87 |
| TAFI | Thrombin-Activable Fibrinolysis Inhibitor | |
| TAPSE | Tricuspid Annular Systolic Excursion | |
| TASH | Transcoronary Ablation of Septal Hypertrophy | |
| TAV | Total Atheroma Volume | |

| Definition | Description | References |
|--------------------------|--|---|
| TBX B2 Thromboxane B2 | Thromboxane B2, the inactive form of Thromboxane: a substance made by platelets that causes blood clotting and constriction of blood vessels. There are two thromboxanes. Thromboxane A2 (TXA2) is active but is very unstable and has a half-life of only 30 seconds before it undergoes hydrolysis to form thromboxane B2 (TXB2) which is inactive. The thromboxanes are derived from arachidonic acid and are related to prostaglandin | <i>Webster's New World™ Medical Dictionary 2nd Edition 2003</i> |
| TC | Total Cholesterol | |
| TCD | Transcranial Doppler (Ultrasonography) | |
| TDI | Tissue Doppler Imaging is a non-invasive ultrasound technique that enables quantitative assessment of regional myocardial wall motion | |
| Test Efficiency | The efficiency of a test is the percentage of the times that the test gives the correct answer compared to the total number of tests. | |
| TFPI | Tissue Factor Pathway Inhibitor | <i>Blood 1997;90(5):1883-92</i> |
| TGFbeta1 | Transforming growth factor-beta1 (TGFbeta1) is a multipotent cytokine that is involved in the regulation of vasculogenesis and angiogenesis | <i>Stem Cells. 2006 Nov;24(11):2420-7</i> |
| Th1 cells | T-helper cell: A type of T cell that provides help to other cells in the immune response by recognizing foreign antigens and secreting substances called cytokines that activate T and B cells. T-helper cells fall into two main classes: those that activate other T cells to achieve cellular inflammatory responses; and those that drive B cells to produce antibodies in the humoral immune response. These two classes of response are generally incompatible with one another and require coordination by substances called cytokines to promote one response while dampening the other. | |
| Thallium-201 stress test | An x-ray study that follows the path of radioactive potassium carried by the blood into heart muscle. Damaged or dead muscle can be defined, as can the extent of narrowing in an artery | |
| Thrombolysis | Dissolution (lysis) of a thrombus (blood clot) usually involving enzyme (plasmin)-catalyzed cleavage of chemical bonds that hold the thrombus together | |
| Thrombolytic Therapy | Pharmacologic agents designed to dissolve blood clots formed within the vascular system | |
| Thrombomodulin | Thrombomodulin is an integral protein that contains one chondroitin/dermatan sulphate chain. It binds to thrombin and act as a cofactor in the activation of protein C catalyzed by thrombin. Glycosaminoglycan chain is not necessary for the activation, but it may be important in preventing thrombin bound to thrombomodulin to cleave fibrinogen. Its core protein contains a short cytoplasmic domain that has a homology with LDL-receptor | |
| Thrombosis | The occlusion or blockage of blood flow within a vessel caused by blood that has clotted within the vessel. Occlusions are thrombi composed of platelets, fibrin, erythrocytes, and leukocytes and may be superimposed on or adjacent to atherosclerotic plaques. Adj: coronary artery Thrombosis, cerebral Thrombosis | |
| Thrombus | A blood clot composed of platelets, fibrin, erythrocytes, and leukocytes: see Thrombosis, Thrombolysis, Thrombolytic therapy | |
| TIA | Transient Ischemic Attack : a temporary, stroke-like event that lasts for only a short time and is caused by a temporarily blocked blood vessel | |
| TIMI | Thrombolysis in Myocardial Infarction | <i>Circulation 1987;76:142-54</i> |
| TIMP | Tissue Inhibitor of Metalloproteinase involved in extracellular matrix maintenance. see also MMPs | <i>JACC 2004;44:1609-18</i> |

| Definition | Description | References |
|------------------------|---|---|
| TLR | Toll-like Receptors (TLRs) type I transmembrane proteins that recognize pathogens and activate immune cell responses as a key part of the innate immune system. In vertebrates, they can help activate the adaptive immune system, linking innate and acquired immune responses. TLR are pattern recognition receptors (PRRs), binding to pathogen-associated molecular patterns (PAMPs), small molecular sequences consistently found on pathogens | <i>Nat Imm</i> 2003 4:1144-50 |
| TNF- alfa | Tumor Necrosis Factor alfa | <i>J Clin Oncol</i> 2005;23(33):8414-21 |
| t-PA | Tissue Plasminogen Activator: naturally occurring substance in the body tissues that activates the enzyme plasmin that is able to dissolve blood clots. Human tPA, produced in bacteria by genetic engineering, has, like Streptokinase, been used to dissolve blood clots in the coronary arteries of heart-attack victims | |
| TPM | Smoke Total Particulate Matter | |
| TPT | Triple Predictive Test: a combination of ECG, troponin and IMA tested in a patient with suspected ACS: a negative TPT is defined as non diagnostic electrocardiogram, negative troponin, and negative IMA, and it has high NPV for excluding ACS in the ED | <i>Am Heart J</i> 2006;0:1-10 |
| Translational Medicine | It is the integrated application of innovative pharmacology tools, biomarkers, clinical methods, clinical technologies, and study designs to improve disease understanding, confidence in drug candidates, therapeutic index in human, cost/effectiveness decision making in drug development | <i>Clinical Sc.</i> 2007;112:217-27 |
| Translational Research | It is one of the activities of translational medicine, and it encompasses a complexity of scientific, ethical, regulatory, legislative, economic, and operational critical points in the process of development of a drug | <i>AJP</i> 2006;126:169-71 |
| Transcriptomics | The study of the transcriptome, the complete set of RNA transcripts produced by the genome at any one time | <i>Webster's New World™ Medical Dictionary 2nd Edition</i> 2003 |
| Transportin 1 | Belongs to the family of importins members of importin super family. It can interact with several Serine/arginine-rich proteins (SR proteins), it facilitates import proteins into nucleus | <i>J Biol Chem</i> 2000 17;275(11):7950-7 |
| Treadmill Score | See Duke Treadmill Score | |
| Tricuspid valve | The structure that controls blood flow from the heart's upper right chamber (the right atrium) into the lower right chamber (the right ventricle) | |
| Triglycerides (Trg) | The most common fatty substance found in the blood; normally stored as an energy source in fat tissue. High triglyceride levels may thicken the blood and make a person more susceptible to clot formation. High triglyceride levels tend to accompany high cholesterol levels and other risk factors for heart disease, such as obesity | |
| TrIFA | Time-resolved immunofluorimetric immunoassay | <i>Clin Chem</i> 2007;53:1503-10 |
| TRL | Triglyceride-rich Lipoproteins | |
| Troponin - cTnT | see cTnT | |
| True value | (Of a quantity): value consistent with the definition of a given particular quantity. This is a value that would be obtained by a perfect measurement. True values are by nature indeterminate | |
| TTP | Total Test Processing | <i>Clin Chem Lab Med</i> 2006;44:150-60 |

| Definition | Description | References |
|----------------------------|---|---|
| Twin Studies | Methods of detecting genetic etiology in human traits. The basic premise of twin studies is that monozygotic twins, being formed by the division of a single fertilized ovum, carry identical genes, while dizygotic twins, being formed by the fertilization of two ova by two different spermatozoa, are genetically no more similar than two siblings born after separate pregnancies | |
| Tx-M | Di-nor-thromboxane B2 | |
| UC | Ultra Centrifugation | |
| UFCT | Ultrafast Computed Tomography allows image acquisition at a faster rate than a conventional CT. Fast imaging is requested to eliminate cardiac and respiratory motion artifacts | <i>Circ Res 2001;89:305-16</i> |
| Ultrasound | High-frequency sound vibrations, which cannot be heard by the human ear, used in medical diagnosis | <i>the time between transmission and reception of the wave is directly related to the distance between the source and reflector</i> |
| Unstable Angina | Form of Angina pectoris (chest pain) characterized by sudden changes in the severity or length of attacks | |
| URL | Upper Reference Limit | |
| Urocortin | Urocortin: an additional CRF-like neuropeptide, has been identified in the brain and has a high affinity for the CRF-2 receptor in addition to the CRF-1 receptor | |
| USPHS | United States Public Health Service | |
| USPSTF | United States Preventive Services Task Force | |
| Utility | The benefit or satisfaction that a person gets from the consumption of a good or service. Adj: social Utility, clinical Utility | |
| VA | Vertebral Artery | |
| <i>Val-HeFT</i> | <i>Valsartan Heart Failure Trial</i> | <i>Am Heart J 2004;148(1):122-8</i> |
| Valid Biomarker | A Biomarker that is measured in an analytical test system with well-established performance characteristics and for which there is an established scientific framework or body of evidence that elucidates the physiologic, toxicologic, pharmacologic, or clinical significance of the test results | |
| Validation in biochemistry | Method: validation should be performed before a test procedure is placed into routine use. Validation may be accomplished by thoroughly testing reference materials or by comparison of results. A process for assessing sensitivity, specificity, and reproducibility | |
| Value Chain | Identification of added values in the steps of a process | |
| Valvular abnormalities | Congenital or acquired valve diseases | |
| VAP | | |
| Variability | Random error in independent measurements as the result of repeated application of the process under specific conditions. Adj: analytical Variability, biological Variability, methodological Variability | |
| Variance | The (population) variance of a random variable is a non-negative number which gives an idea of how widely spread the values of the random variable are likely to be; the larger the variance, the more scattered the observations on average. Stating the variance gives an impression of how closely concentrated round the expected value the distribution is; it is a measure of the 'spread' of a distribution about its average value. Variance is symbolized by $V(X)$ or $\text{Var}(X)$ | |

| Definition | Description | References |
|------------------------|---|--|
| Variation | The differences in results obtained in measuring the same phenomenon more than once. Excessive variation frequently leads to waste and loss, such as the occurrence of undesirable patient health outcomes and increased cost of health services. Common-cause variation, also called endogenous cause variation or systemic cause variation, in a process is due to the process itself and is produced by interactions of variables of that process as inherent in all processes, not a disturbance in the process. It can be removed only by making basic changes in the process. Special-cause variation, also called exogenous-cause variation or extrasystemic cause variation, in performance results from assignable causes. Special-cause variation is intermittent, unpredictable, and unstable. It is not inherently present in a system; rather, it arises from causes that are not part of the system as designed | |
| Vasopressin | Arginine vasopressin (AVP) also argipressin or antidiuretic hormone (ADH), is a human hormone released when the body is low on water; it causes the kidneys to conserve water, but not salt, by concentrating the urine and reducing urine volume. It also raises blood pressure by inducing moderate vasoconstriction | <i>Vander, A.J., Renal Physiology, McGraw-Hill, 1991</i> |
| V-CAM-1 | Vascular Cell Adhesion Molecule-1: an immunoglobulin super family glycoprotein (100-110 kDa) expressed on activated endothelial cells, macrophages, and smooth muscle cells, participates in the inflammatory initiation and progression of atherosclerotic plaques | <i>Circulation 2006;114;1504-11</i> |
| VEGF | Vascular Endothelial Growth Factor | |
| Ventricle | One of the two lower chambers of the heart. Right Ventricle: RV, Left ventricle: LV | |
| Ventricular remodeling | Describes structural changes in LV in response to chronic alterations loading conditions with three major patterns: concentric remodeling with growth cardiomyocyte thickness; eccentric hypertrophy with myocyte lengthening; post myocardial infarction with a remodeling of the non infarcted areas. In all patterns there is a contribution by fibrosis | |
| VES | Ventricular Extra Systole or Ventricular Premature Contraction or Premature ventricular contraction (PVC), also known as ventricular premature beat (VPB) or extra systole, is a form of irregular heartbeat in which the ventricle contracts prematurely | |
| Vfib | Ventricular Fibrillation | |
| VFRs | Vascular Risk Factors | |
| Viability assessment | To assess the Viability of the myocardium: since uptake of radiotracers implies cell membrane integrity, the concentration of these tracers in the myocardium reflects the status of Viability | |
| Visfatin | Recognized as PBEF is expressed in visceral adipose tissue. A protein secreted by visceral fat that mimics the effects of insulin | <i>Science. 2005;307(5708):426-30</i> |
| VIIc | VII component of the coagulation cascade | |
| VLDL | Very Low Density Lipoproteins | |
| VT | Ventricular Tachicardia | |

| Definition | Description | References |
|-------------------------|---|------------------------------------|
| Vulnerable plaque | Vulnerable plaque is formed in the following way: Fat droplets are absorbed by the artery, which causes the release of proteins (called cytokines) that lead to inflammation. The cytokines make the artery wall sticky, which attracts immune-system cells (monocytes). The monocytes squeeze into the artery wall. Once inside, they turn into cells called macrophages and begin to soak up fat droplets. The fat-filled cells form a plaque with a thin covering. When this inflammation is combined with other stresses, like high blood pressure, it can cause the thin covering over the plaque to crack and bleed, spilling the contents of the vulnerable plaque into the bloodstream. The sticky cytokines on the artery wall capture blood cells (mainly platelets) that rush to the site of injury. When these cells clump together, they can form a clot large enough to block the artery. | |
| vWF | Von Willebrand factor (vWF) mediates platelet adhesion to injured endothelium, the first step in hemostasis. It also helps maintain factor VIII levels. When vWF is deficient, patients have a bleeding disorder called von Willebrand disease (vWD). vWD is the most common hereditary bleeding disorder, of which several subtypes are recognized. The von Willebrand factor is a large multimeric glycoprotein found in blood plasma. Mutant forms are involved in the etiology of bleeding disorders. In von Willebrand factor, the type A domain (vWF) is the prototype for a protein super family. The vWF domain is found in various plasma proteins: complement factors B, C2, CR3 and CR4; the integrins (I-domains); collagen types VI, VII, XII and XIV; and other extra cellular proteins. Proteins that incorporate vWF domains participate in numerous biological events (e.g. cell adhesion, migration, homing, pattern formation, and signal transduction), involving interaction with a large array of ligands | |
| Waist to Hip ratio- W/R | Waist Hip Ratio- W/R- is calculated by dividing your waist measurement by your hip measurement | |
| WAVE | <i>Women's Angiographic Vitamin and Estrogen</i> | <i>JAMA 2002;288:2432-40</i> |
| WBC Myeloperoxidase | White Blood Cells Myeloperoxidase | |
| WBCC | White Blood Cells Counting | |
| WBCHO | Whole Blood Choline | |
| Western Blotting | Identification of proteins separated by size by polyacrilamide gel electrophoresis: the proteins are then transferred to a membrane (typically nitrocellulose or PVDF), where they are probed (detected) using antibodies specific to the target protein | |
| WHI | Women's Health Initiative | <i>JAMA 2002;288:980-7</i> |
| WHO | World Health Organisation | |
| WHR | Waist/Hip Ratio | |
| WHS | <i>Women's Health Study</i> | <i>Circulation 1996; 98:731-33</i> |
| WOSCOPS | <i>West Of Scotland Coronary Prevention Study</i> | <i>NEJM 2000;343:1148-55</i> |
| WS infarcts | Watershed Infarcts, Cortical (CWS) and Internal (IWS) watershed infarcts | <i>Stroke 2005;36:567-77</i> |
| X-ray | Form of radiation used to create a picture of internal body structures on film | |