

**GLOSSARY** – please click the back button on your browser to return to newsletter

<b>Abstract</b>	An abstract is a written summary of a scientific manuscript, clinical trial, or project. Most scientific and medical journals, conferences, and symposiums require a researcher to submit an abstract; it is from this that a determination is made whether or not to allow the work to be presented.
<b>Adipose Tissue</b>	Loose connective tissue composed of adipocytes; Its main role is to store energy in the form of fat, although it also cushions and insulates the body.
<b>Aromatase Inhibitors</b>	A class of drugs used in the treatment of breast cancer and ovarian cancer in postmenopausal women. AIs may also be used off-label to treat or prevent gynaecomastia in men. Aromatase is the enzyme that synthesizes estrogen.
<b>Asanas</b>	A body position, typically associated with the practice of Yoga, originally identified as a mastery of sitting still.
<b>Ashtanga Yoga</b>	A system of yoga popularized by K. Pattabhi Jois, and which is often promoted as a modern-day form of classical Indian yoga. Ashtanga Yoga is different from many yoga classes in the west in that the order of asanas is completely predefined. A practice will comprise four main parts: an "opening sequence," one of the six main "series", a back-bending sequence, and a set of inverted asanas, referred to as the "happy ending" or "finishing sequence."
<b>Atom</b>	An atom is the smallest constituent unit of ordinary matter that has the properties of a chemical element. Every solid, liquid, gas, and plasma is composed of neutral or ionized atoms.
<b>Benign Breast Disease</b>	A common condition marked by benign (noncancerous) changes in breast tissue. These changes may include irregular lumps or cysts, breast discomfort, sensitive nipples, and itching.
<b>Biomarker</b>	A distinct biochemical, genetic, or molecular characteristic or substance that is an indicator of a particular biological condition or process.
<b>Biospecimen</b>	A specimen of biological material, such as urine, blood, tissue, cells, DNA, RNA, and protein, to be stored in a biorepository for future research.
<b>Breast Compartment</b>	Tissue type in the breast; Breast tissue composed of three different compartments: epithelium, stroma, and adipose.
<b>Cell Dissemination</b>	The ability of a cell (i.e. tumor cell) to spread through the body by leaving the primary location (i.e. primary tumor mass) and reach a distant organ, in case of a tumor cell, to form a metastasis; This can occur through both the bloodstream and lymphatic system.

<b>Cell Line(s)</b>	A permanently established cell culture ( <i>the procedure of growing or maintaining cells in a laboratory</i> ) that will proliferate indefinitely given appropriate fresh medium ( <i>the nutrient solution in which cells or organs are grown</i> ) and space.
<b>Cell Migration</b>	The orchestrated movement of cells in particular directions to specific locations - a central process in the development and maintenance of multicellular organisms.
<b>Characterize (cells)</b>	Identification of cells as those of a particular type.
<b>Circadian</b>	Noting or pertaining to shythmic biological cycles rucurring at approximately 24-hour intervals.
<b>Contributed Paper</b>	A contributed paper is a research paper; a manuscript; a fleshed-out, fully referenced version of the ideas to which the abstract refers.
<b>Control Tissue</b>	A control group is the experimental group tested without changing the variable ( <i>a defined, changeable factor.</i> )
<b>Downregulation</b>	The process by which a cell decreases the quantity of a cellular component, such as RNA or protein, in response to an external variable.
<b>DNA</b>	A self-replicating material present in nearly all living organisms as the main constituent of chromosomes ( <i>threadlike structures of nucleic acids and protein found in the nucleus of most living cells, carrying genetic information in the form of genes.</i> ) DNA is the carrier of genetic information.
<b>Epidemiology</b>	The branch of medicine that deals with the study of the causes, distribution, and control of disease in populations.
<b>Epithelial</b>	Relating to the epithelium, the outside layer of cells that covers all the free, open surfaces of the body including the skin, and mucous membranes that communicate with the outside of the body.
<b>Epithelium</b>	The thin tissue forming the outer layer of a body's surface and lining the alimentary canal and other hollow structures.
<b>Estrogen</b>	Female hormone produced by the ovaries and released by the follicles as they mature. Responsible for female sexual characteristics, estrogen stimulates and triggers a response from at least 300 tissues, and may help some types of breast cancer to grow. After menopause, the production of the hormone gradually stops.

<b>Estrogen Receptors</b>	A group of proteins found inside cells. They are <b>receptors</b> that are activated by the hormone estrogen.
<b>Expression</b>	The genetic code stored in DNA is "interpreted" by gene expression, and the properties of the expression give rise to the organism's phenotype ( <i>the observable physical or biochemical characteristics of an organism.</i> )
<b>Formalin-fixed Paraffin-embedded Tissue</b>	Tissue that is first separated from a specimen animal by dissection or biopsy. This tissue is "fixed" with formaline in order to prevent it from decay or degeneration and to be able to examine it clearly under a microscope for histological, pathological or cytological studies. The fixed tissue is then embedded in wax, cut into fine sections, and stained with Hemotoxylin and Eosin Stain ( <i>see glossary entry for H&amp;E Stain.</i> )
<b>Gene Regulation</b>	Regulation of gene expression (or gene regulation) includes the processes that cells and viruses use to turn the information in genes into gene products ( <i>the biochemical material, either RNA or protein, resulting from expression of a gene.</i> )
<b>Genomics</b>	The study of genes and their function.
<b>H&amp;E Stain (Hematoxylin and Eosin Stain)</b>	A popular staining method in histology ( <i>see glossary entry.</i> ) [Note: Biological tissue has little inherent contrast in either the light or electron microscope. Staining is employed to both give contrast to the tissue and highlight particular features of interest.]
<b>Heterogeneity</b>	The quality of being diverse and not comparable in kind.
<b>Histology</b>	The study of the microscopic anatomy of cells and tissues of plants and animals.
<b>Homogeneous</b>	Of uniform quality, composition, or structure.
<b>Immune Response Inhibition</b>	Immune suppression or blocking the immune response.
<b>In situ</b>	Situated in the original, natural, or existing place or position.
<b>Investigator (Clinical or Scientific)</b>	An investigator is responsible for ensuring that an investigation (research or experiment) is conducted according to the attending protocol.

<b>Komen Catalyst Research Grant</b>	Career Catalyst Research (CCR) Grants have fostered promising breast cancer researchers who are in the early stages of their faculty careers <a href="http://sgk.mn/2ZjnFho">http://sgk.mn/2ZjnFho</a>
<b>Lobular Involution</b>	Refers to the decrease in size and complexity of the breast ducts which is a result of a gradual loss of breast ductal tissue that occurs as a woman ages. This loss is pronounced as she enters the perimenopausal period.
<b>Metabolic Activation</b>	The chemical conversion of a relatively benign substance into a more hazardous one by normal biochemical processes in cells and tissues.
<b>Metabolic Pathways</b>	Any of the sequences of biochemical reactions, catalyzed by enzymes, that occur in all living cells; concerned mainly with the exchange of energy and chemicals.
<b>Metabolites</b>	A product of <i>metabolism</i> , the chemical changes in living cells by which energy is provided for vital processes and activities and new material is assimilated.
<b>Molecular Mechanism</b>	The way molecules act and interact to generate an effect or phenotype.
<b>Molecule</b>	The smallest particle of a substance that retains all the properties of the substance and is composed of one or more atoms.
<b>Morphology</b>	The branch of biology that deals with the forms of living organisms, and with relationships between their structures.
<b>Next Generation Sequencing</b>	“Next generation sequencing” (also called massively parallel or deep sequencing) describes a revolutionary DNA sequencing technology. Sequencing DNA means determining the order of the four chemical building blocks - called "bases" - that make up the DNA molecule. The sequence tells scientists the kind of genetic information that is carried in a particular DNA segment. Next generation sequencing makes it possible to do in one day what would previously take years to accomplish.
<b>Normal Breast</b>	Breast tissue which is absent of cancer or pre-malignancy and demonstrates appropriate hormonal changes throughout the stages of a woman’s lifespan.
<b>Nulliparity</b>	The condition of not having borne a child.
<b>Overexpress</b>	To produce in excess, as does the genetic material of cancer cells.
<b>Parity</b>	The state or fact of having borne children.

<b>Parous</b>	Having given birth one or more times.
<b>Plasma</b>	The pale yellow fluid of whole blood that consists of water and its dissolved constituents including especially proteins.
<b>Plenary</b>	Carrying a general connotation of fullness. A plenary session or meeting is the part of a conference when all members of all parties are in attendance.
<b>Poster</b>	A research poster is exactly that – a giant “science fair” – like poster containing background information, important data, and images or slides of the researcher’s project or experiment. A poster is one presentation option, along with a contributed paper, a poster discussion, or a full presentation, for which an abstract can be chosen.
<b>Poster Discussion</b>	A poster discussion is a panel-type discussion, led by moderators in front of an audience, and carried by the authors of (usually) several accepted posters at a conference or symposium.
<b>Precursor</b>	A person or thing that comes before another of the same kind; a forerunner.
<b>Predisposition</b>	An increased vulnerability to a particular disease based on genetic factors or the existence of certain underlying conditions not yet active or revealed.
<b>Principal Investigator</b>	A (the) lead scientist on a project or clinical trial.
<b>Processor</b>	The part of a computer that interprets and executes instructions.
<b>Progenitor</b>	A parent or ancestor.
<b>Progesterone</b>	A hormone naturally secreted by the ovary, or manufactured synthetically that prepares the uterus for implantation of a fertilized egg.
<b>Proteome</b>	The full complement of proteins that occur within a cell, tissue, <u>or</u> organism
<b>Quantitation</b>	To determine the quantity of, especially with precision.
<b>Serum</b>	The clear yellowish fluid that remains from blood plasma after clotting factors have been removed by clot formation.
<b>Server</b>	A computer system that provides essential services across a network, to private users inside a large organization or to public users in the internet.

<b>Sporadic Breast Cancer</b>	Breast cancer that is not due to an inherited gene mutation.
<b>Stroma</b>	The supportive tissue of an epithelial organ, tumor, gonad, etc., consisting of connective tissues and blood vessels.
<b>Subset</b>	A part of a larger group of related things.
<b>Symposium</b>	A formal meeting at which several specialists deliver short addresses on a topic or on related topics.
<b>Tamoxifen</b>	Treats advanced breast cancer in men and women, and early breast cancer in women. Also may prevent breast cancer in women who are at a high risk because of age, family history, or other factors.
<b>Terminal Duct Lobular Unit</b>	The structures responsible for milk production in lactating women, and the predominant structures from which breast cancer arises.
<b>Tissue</b>	An aggregate ( <i>collection</i> ) of cells in an organism that have similar structure and function.
<b>Tissue Homeostasis</b>	A homeostatic process involved in the maintenance of an internal steady state within a defined tissue of an organism.
<b>Triple-Negative Breast Cancer</b>	A subtype of breast cancer which is clinically characterized as more aggressive and less responsive to standard treatment and is associated with poorer overall patient prognosis.
<b>Virtual Tissue Bank</b>	A tissue bank wherein the materials and samples are held (stored) at the local institutions until needed, and then shared through the internet according to the local ethical guidelines.