Glossary

Term	Meaning
A	The angstrom is a metric unit of length equal to 10 m
Abscess	An infected area that contains pus (dead cells and bacteria)
Acute lymphoblastic leukaemia	A type of blood cancer where there is a development of immature lymphocytes; a type of white blood cell.
Adjacent cells	The cells close together.
Amplification	Multiple copies of a chromosome.
Apoptosis	Programmed cell death
Benign	A tumour that does not invade or destroy the site of origin.
Blood	A fluid found in mammals that contains cells, water, proteins and gases and travels around the body.
Bowel	Another term for intestine. The small bowel is involved in food digestion and absorption. The large bowel absorbs water.
Breast	A type of mammary gland that produces milk in women and is surrounded with fatty tissue.
Cancer	A disease caused by genetic mutations that lead to uncontrolled cell growth.
Carcinoma	A cancer commonly found around the lining of organ tissues (epithelial).
Cell	A simplest unit of a living organism.
Central dogma	How genes are expressed at a molecular level through the process of transcription and translation
Centromere	The centre of the chromosome where two sister chromatids are tightly linked. It is connected to a kinetochore protein that are involved in chromosomal sorting.
Chemical reaction	A reaction where two substances or reactants chemically bind to produce a new product.
Chromatid	One of the two threadlike structures and is attached at the centromere.
Chromosome	They are threadlike structures that contain genetic information.
Chronic myeloid leukaemia	A type of blood cancer that originates in the blood cell forming tissue called myeloid found in the bone marrow. There is abnormal growth due to mutation in the Philadelphia chromosome.
Compartmentalisation	Defined regions that separate organelles.
Concentration	The amount of solute dissolved in a given volume of solution.
X-ray crystallography	A scientific technique used to determine the order of atoms of a crystalline solid in 3D space.
Deletion	A region missing in a chromosome.
Deoxyribose	A 5-carbon sugar in DNA that has no oxygen at position 3.

Dermis	The thickest skin layer under the epidermis. This is where you will find blood vessels, lymph vessels, nerve endings and sweat glands.
Differentiation	Changes to cell shape and function where unspecialised cells divide to become specialised for specific functions.
Diffraction	When a wave (transfer of energy) meets a gap in a barrier, they continue through the gap and spread out.
Diffusion	A solute that moves from a region of high concentration to a region of low concentration.
Disease	A disorder with specific cause and recognised signs and symptoms.
DNA polymerase	An enzyme that links nucleotides together to from DNA strands.
RNA polymerase	An enzyme that produces RNA strands during transcription.
DNA repair	Reverse damage to DNA before permanent mutations occur.
DNA replication	The process where DNA is copied
DNA (deoxyribonucleic acid)	It is one of the two nucleic acids and consists of two polynucleotides coiled together to form a double helix.
Egg	A female sex/reproductive cell.
Enzyme	A type of protein responsible for speeding a chemical reaction
Extracellular fluid	The fluid outside the cell.
Epidermis	The outer layer of the skin.
Gamete	A cell involved in sexual reproduction.
Gangrene	Death or decay of part of body due to lack of blood supply.
Gene	Hereditary unit and short section of DNA that helps determine characteristics of an organism.
Genome	The complete gene composition of a cell.
Haploinsufficient	One copy of a gene is deleted or has a loss-of-function mutation. This implies50% of the normal active form of a particular protein is expressed in a cell.
Hormone	A chemical messenger that travels via the blood to target cells.
Hydrogen bonding	A force of attraction between a hydrogen bond and a small atom such as oxygen or nitrogen that is highly electronegative on the same or different molecule. Electronegativity is how an atom is able to attract negative particles called electrons to its outer shell.
Hydrophilic	A substance that can dissolve in water and ‘water-loving’.
Hydroxyl	A group that has OH-
Hypodermis	The bottom layer of the skin. It connects the dermis layer to the muscles and bones. There is fat tissue which helps keep you warm.
Immunoglobulin	The Y-shaped protein that protects the body from foreign molecules and harmful microbes. A type of immunoglobulin is antibody.

Induced mutation	An environmental agent that enters the cell and alter DNA.
Infection	The body is invaded by harmful agents.
Insertion	A type of mutation where there is an addition of DNA bases added to the sequence.
Interstitial fluid	The fluid between cells
Intracellular fluid	The fluid inside the cells.
Invasion	Species that spread with current spaces on their own.
Inversion	The change in direction of genetic material along single chromosomes.
Lung	An organ that helps to breath in oxygen and breath out carbon dioxide.
Lymph vessels	They contain white blood cells and collect excess interstitial fluid and return to blood
Leukocyte	A type of white blood cell that provides specific immunity.
Malignant	Cancer cells progressed and grew out of origin site.
Metastasis.	The process can migrate parts of the body.
Mitochondria	An organelle that produces energy.
Molecule	Two or more atoms joined by chemical bonds
Monomer	A monomer is a type of molecule or unit where many joined together form polymers.
Mortality.	The incidence of death
mRNA	An abbreviation of messenger RNA and has key information to produce a polypeptide (protein). It carries information from nucleus to the ribosome.
Multicellular	More than one cell bound together.
Muscle	A group of specialised cells that together form a tissue and are involved in support and movement.
Mutagen	Chemical that causes mutations.
Mutation	A random change in the DNA that affects that particular gene or chromosome.
Nucleotide	A molecule that has a phosphate group, five-carbon sugar and base.
Nucleus	Organelle that contains genetic information to control cell.
Oncogene.	A mutated form of a gene that leads to uncontrolled growth of cancer cells. It is derived from proto-oncogenes.
Organelle	A structure or little organ with a defined structure and function.
Papyrus	A paper derived from the pith of the papyrus plant used for writing in the ancient times.
Phenotype	The characteristics of an organism based on the expression of genes.
Phosphodiester	A phosphodiester bond is formed between two sugar molecules and a phosphate group.
Plasma	The fluid part of the blood.

Polymer	A large molecule where smaller molecules called monomers linked together.
Proliferation	A rapid increase in number.
Prostate	It is found in the male reproductive system and secretes fluid that is part of the semen.
Protein	A large molecule containing amino acids and functions for growth and repair.
Proteosome	The primary way how proteins destroyed.
Proto-oncogene	A normal gene and if mutated produces oncogene.
Purine	A base with lots of nitrogen atoms with a two-ring structure.
Pyrimidine	A base with lots of nitrogen atoms with a one ring structure.
Radiation	The transfer of energy as waves or particles through space or a material.
Relapse	A decrease in one's health after improvement e.g., returned cancer.
Ribose	5 carbon sugar.
Ribosome	The organelle in a cell that produces proteins.
RNA	A single strand of nucleotide
Seminal vesicle	It produces fluid into a tube-like duct called vas deferens in the male reproductive system.
Senescence	Cells reached their capacity to divide anymore.
Signal	An agent or molecule that affects the properties of the cell.
Sperm	A male reproductive cell.
Spontaneous mutation.	It arises via natural causes or biological processes
Telomerase	It catalyses or speeds up the replication of telomere.
Telomere	The ends of chromosomes where DNA replication takes place.
Template	The DNA strand used as a template during the production of RNA.
Transcription	The process of using DNA as a template to make an RNA molecule.
Transcription factor	The protein that helps transcribing genes by affecting RNA polymerase
Translation	The process of using an mRNA molecule (type of mRNA) as a template to make a protein.
Tumour	An overgrowth of cells without use.
Tumour suppressor	A gene that encodes a protein to stop cancer growth
Tyrosine kinase	An enzyme that functions in cell division and growth.
Ureter	A structure in the kidney where urine flows from kidney to bladder where urine is stored.
White blood cells	Also known as leukocyte and protects the body against foreign substance.