

Glossary of Terms

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Albumin	The primary protein in human blood plasma, made by the liver. Also found in the urine, where, in excess, it usually indicates kidney damage.
Aldosterone	A steroid hormone, produced by the adrenal glands, that regulates the salt and fluid balance in the body. Too much can contribute to the development and progression of cardiovascular and chronic kidney disease.
Angiotensin	The liver creates and releases a protein called angiotensinogen. This is then broken up by renin, an enzyme produced in the kidney, to form angiotensin, which is a peptide hormone that can cause increased blood pressure. Angiotensin also stimulates the release of aldosterone.
Anti-fibrotic	<i>Fibrosis</i> is the formation of excess fibrous connective organ tissue in a reparative or reactive process. Fibrosis can occur in many tissues within the body, typically as a result of inflammation or damage. An anti-fibrotic is any agent that blocks or prevents tissue scarring.
Autosomal dominant kidney disease (ADPKD)	A genetic condition that causes cysts to develop in the kidneys. When the cysts grow large enough, generally in adulthood between 30-60 years of age, it can cause a wide range of problems, including abdominal pain, high blood pressure, urinary tract infections, blood in the urine, and kidney stones. Patients with ADPKD also have progressive CKD and generally end up requiring dialysis or transplantation by age 50.
Biomarker	A measurable indicator of a specific biological state or condition. The presence of a biomarker can indicate disease, infection or environmental exposure.
Biorepositories	A biological materials “library” that collects, processes, stores, and distributes biospecimens (human or other living organisms) for research.
British Columbia Provincial Renal Agency (BCPRA)	An agency within the Provincial Health Services Authority in BC that plans and monitors the delivery of province-wide kidney care services.
Canadian Institute for Health Information (CIHI)	An independent, not-for-profit organization that provides essential information on Canada’s health system and the health of Canadians.
Canadian Organ Replacement Registry (CORR)	A national database that records basic information on all people on dialysis and with a kidney transplant in Canada. This provides information that helps kidney care providers and health care funders track long-term trends for dialysis activity,

organ transplantation, and organ donation.

Cancer Care Ontario (CCO)

An agency of the provincial Government of Ontario that is responsible for funding cancer and kidney care across Ontario. CCO is responsible for ensuring the Ontario Renal Network functions efficiently.

Chronic Kidney Disease

A common, complex, chronic condition, usually occurring in conjunction with other chronic diseases (such as diabetes and cardiovascular disease), that results in the progressive loss of kidney function over a period of months or years. Chronic kidney disease is defined as abnormalities of kidney structure or function (estimated glomerular filtration rate < 60 ml/min/m² – see below) present for >3 months.

Comorbidity

Comorbidity refers to other chronic medical conditions a patient may have. The simultaneous presence of two chronic diseases or conditions is termed multi-morbidity.

Cytokines

Cytokines are a broad category of small proteins, important in cell signaling, that affect the behavior of other cells. They are released by cells and communicate to other cells in immune responses, stimulating cell movement towards sites of inflammation, infection and trauma.

Dialysis

Dialysis is when we replace the function of the kidney using special equipment to clean the blood. There are two basic kinds of dialysis: hemodialysis, and peritoneal dialysis.

Hemodialysis is when your blood is passed through an artificial kidney, which is called a dialyser. The dialyser filters out the waste and extra fluids. Hemodialysis is usually done for 4 hours three times per week. It is usually done in a hospital or clinic, though patients can be trained to do this at home.

Peritoneal dialysis is when the blood is cleaned inside the body through the peritoneum. A soft rubber tube is placed in the abdomen and clean dialysis fluid is poured in and out of the abdomen 4 times per day, or using a cycler machine which does the dialysis at night while people sleep.

Dialyzer

A dialyzer is an artificial kidney designed to control the transfer of solutes and water across a semi-permeable membrane. It has blood on one side and fluid on the other side to remove toxins during dialysis.

Edmonton Symptom Assessment System (ESAS)

A validated patient-reported outcome measure for assessing a list of physical and psychological symptoms. It was originally developed for cancer care but is now used extensively in other chronic care settings, e.g. heart disease and kidney disease. A modified version was validated for use in patients on dialysis.

Electronic medical record

A collection of patient health information that is stored in a digital format and can be shared across different health settings.

Endothelial progenitor cells (EPC)	A term that has been applied to multiple different cell types that play a role in the regeneration of the endothelial lining of blood vessels. EPCs are generally considered promising targets of regenerative medical research.
EQ-5D-5L	A standardised instrument of the EuroQol Group for use as a measure of health outcome. It is applicable to a wide range of health conditions and treatments. It provides a simple descriptive profile and a single index value for health status.
Estimated glomerular filtration rate (eGFR)	A measure of kidney function that is estimated from a simple blood test (serum creatinine) and other parameters (age, sex, race). In simple terms, eGFR is similar to %kidney function – those with eGFR<60 mls/min/m ² (similar to 60% kidney function) are deemed to have chronic kidney disease, while those with eGFR<10 mls/min/m ² have advanced kidney failure and typically require dialysis or kidney transplantation.
Generalized Anxiety Disorder (GAD)-2 or GAD-7	Self-reported questionnaires for screening and assessing the severity of generalized anxiety disorder. GAD-2 is a two-item questionnaire, whereas GAD-7 contains seven questions.
Glomerulonephritis (GN)	An inflammatory disease of the kidney, typically caused by an immune response, which usually causes progression to end-stage kidney failure within years.
Infarction	Tissue death (necrosis) caused by a local lack of oxygen, due to an obstruction of the tissue's blood supply. Often occurs in the myocardium (heart tissue), leading to a heart attack, though can also occur in the kidney, leading to kidney damage.
Interactive Symptom Assessment and Collection (ISAAC)	A tool developed by Cancer Care Ontario that allows cancer patients to assess and monitor their symptoms through an online computer program. This tool is available at kiosks in 14 regional cancer centres and 28 partner hospitals across Ontario.
Kidney	The kidneys are bean-shaped organs that remove waste products from blood.
Kidney Disease Quality of Life (KDQOL)	A series of questions that assess quality of life across a variety of areas of importance to people with advanced kidney failure on dialysis. Example of KDQOL is the SF-36.
Nephrology	The study of kidneys, kidney function and the renal system.
Ontario Renal Network (ORN)	A division of Cancer Care Ontario and an agency of the provincial government. It funds and manages the delivery of care for Ontarians with advanced kidney disease.
Patient and Family Advisory Council (PFAC)	A group of dedicated and dynamic individuals – patients, family members and caregivers – representing a range of experiences with the kidney care system who helps guide the development of policies and initiatives that directly impact the way kidney care is provided in Ontario.

Patient Assessment in Chronic Illness Care (PACIC)	A validated patient-reported experience measure that specifically assesses components of chronic care delivery from the perspective of the patient. The survey consists of 20 questions grouped into five subsets that emphasize patient interactions with health care professionals, predominantly correlated with self-management support.
Patient Health Questionnaire (PHQ)	A self-reported tool for diagnosing mental health disorders. There are different versions of PHQ in various lengths. For example, PHQ-2 is a screening tool for depression with two questions.
Patient-reported experience measure (PREM)	Measurement instrument that patients complete to capture their view of what happened during their health care visit – in particular their experience.
Patient-reported outcome measure (PROM)	Measurement instruments that patients complete to provide information on aspects of their health status that are relevant to their quality of life, including symptoms, functionality and physical, mental and social health. The KDQOL-SF, ESAS, and Euroqol EQ-5D are all examples of PROMs.
Pro-angiogenic	Angiogenesis is the physiological process through which new blood vessels form from pre-existing vessels. Pro-angiogenic therapies, being explored to treat cardiovascular diseases, can be differentiated into three main categories: 1) gene-therapy, targeting genes of interest for amplification or inhibition; 2) protein-therapy, which primarily manipulates angiogenic growth factors; and 3) cell-based therapies, which involve the implantation of specific cell types.
Proteinuric kidney disease	Protein in the urine (“proteinuric kidney disease”) is a marker of more severe kidney damage and has prognostic value for long term outcomes. It can be measured using simple urinary laboratory tests. Patients with proteinuric CKD progress much more rapidly to advanced CKD, and proteinuria is also a strong predictor of cardiovascular events.
RNA	Like DNA, ribonucleic acid (RNA) is a nucleic acid that constitutes a macromolecule essential for all known forms of life (along with proteins and carbohydrates).
mRNA	Messenger RNA (mRNA) is a large family of RNA molecules that convey genetic information from DNA to assemble, in order, the chain of amino acids that form a protein.
Spirolactone	A synthetic steroid derivative and potassium-sparing diuretic (water pill) that prevents the body from absorbing too much salt and keeps potassium levels from getting too low. It is designed to oppose the hormone aldosterone, and is used in the treatment of high blood pressure and heart failure.
Urine albumin to creatinine ratio (uACR)	A term used to describe the ratio of a key protein (albumin) to creatinine found in a urine sample. It is a marker of kidney damage, and higher levels are associated with increased risk of kidney failure and cardiovascular events. It is a more specific

measure of risk than measurement of urinary proteinuria itself (see below).

Valley 1

A figurative gap to be bridged in the translation of findings of biomedical, clinical and population health research into first-in-human studies.

Valley 2

A figurative gap to be bridged in the translation of outcomes of clinical studies into patient care.

For definitions regarding other research-related terms, please visit Canadian Institutes of Health Research's Jargon Buster at <http://www.cihr-irsc.gc.ca/e/48952.html>