Postgraduate Certificate in Renal Care (Part II)

# Palliative Care In Renal Disease

Adequacy of Dialysis – related terms: dialysis prescription, clearance. A measure of whether the dialysis dose meets the patient's metabolic needs, often expressed as Kt/V or urea reduction ratio. In palliative care, adequacy is balanced against quality-of-life goals; a lower dose may be acceptable if it reduces treatment burden.

Advance Care Planning (ACP) – related terms: living will, directive. A structured process whereby patients, families, and clinicians discuss future health-care preferences, including decisions about dialysis continuation, transplantation, and end-of-life care. Documentation guides clinicians when the patient loses decision-making capacity.

Alkaline Phosphatase – related terms: bone turnover, renal osteodystrophy. An enzyme measured in serum that may rise in high-turnover bone disease, a common complication of chronic kidney disease (CKD). Elevated levels can signal worsening mineral-bone disorder, influencing symptom management in palliative settings.

Albumin, Serum – related terms: nutritional status, prognostic marker. Low serum albumin (Angiotensin-Converting Enzyme (ACE) Inhibitors – related terms: blood pressure control, proteinuria. Medications that reduce intraglomerular pressure and slow CKD progression. In advanced disease, they may be deprescribed if they cause hypotension, cough, or interfere with palliative goals.

Arteriovenous Fistula (AVF) – related terms: vascular access, dialysis. A surgically created connection between an artery and a vein, providing durable access for hemodialysis. In palliative care, the decision to create, maintain, or abandon an AVF involves weighing procedural risk against expected benefit.

Arteriovenous Graft (AVG) – related terms: synthetic conduit, dialysis access. An alternative to AVF using a prosthetic material. It matures faster but has higher infection risk. Choice of access type influences patient comfort and infection burden near end of life.

Assessment of Pain – related terms: numeric rating scale, opioid rotation. Systematic evaluation of pain intensity, quality, and impact using validated tools. Effective pain control is a cornerstone of palliative care for renal patients, who may experience nociceptive, neuropathic, or uremic pain.

Bereavement Support – related terms: grief counseling, family care. Services offered to families after a patient's death, addressing emotional, spiritual, and practical needs. Early referral can mitigate complicated grief, especially when death follows a prolonged dialysis course.

Biochemical Markers of Uremia – related terms: urea, creatinine. Substances that accumulate as kidney function declines, causing symptoms such as nausea, pruritus, and encephalopathy. Monitoring guides decisions about initiating or stopping dialysis in a comfort-focused plan.

Body Mass Index (BMI) – related terms: nutritional assessment, cachexia. Ratio of weight to height (kg/m$^2$) used to identify under- or overweight status. Low BMI in CKD predicts higher mortality and may trigger targeted nutrition or palliative interventions.

Bradykinin – related terms: dialysis membrane, hypotension. A peptide that can cause vasodilation and itching during hemodialysis, especially with high-flux membranes. Managing bradykinin-related symptoms improves comfort during treatment sessions.

Cardiac Output Monitoring – related terms: hemodynamic stability, ultrafiltration. Techniques (e.G., Bioimpedance) to assess circulatory status during dialysis. In palliative care, minimizing intradialytic hypotension reduces fatigue and improves overall well-being.

Category-Based Symptom Management – related terms: algorithmic care, clinical pathways. Structured approach that groups symptoms (pain, pruritus, dyspnea) and applies evidence-based treatment steps. Facilitates consistent, rapid response to distress in renal palliative settings.

Cause-Specific Mortality – related terms: survival analysis, epidemiology. Death attributed to a particular disease process (e.G., Cardiovascular, infection). Understanding patterns helps clinicians anticipate likely complications and discuss realistic prognoses with patients.

Central Venous Catheter (CVC) – related terms: temporary access, infection risk. A catheter placed in a large vein for hemodialysis. While convenient, it carries high rates of bloodstream infection and thrombosis, making its continued use a frequent ethical dilemma in end-of-life care.

Chronic Kidney Disease (CKD) Staging – related terms: eGFR, albuminuria. Classification (Stage 1–5) based on estimated glomerular filtration rate and protein excretion. Staging informs prognosis, timing of dialysis initiation, and palliative referral triggers.

Clearance – related terms: Kt/V, dialysis dose. The volume of blood cleared of a solute per unit time, expressed in mL/min or as a dimensionless ratio. Adequate clearance relieves uremic symptoms, but in palliative care the goal may shift to symptom control rather than target values.

Clinical Frailty Scale – related terms: functional status, prognosis. A 9-point tool that grades frailty from “very fit” to “terminally ill.” Higher scores correlate with increased mortality and guide decisions on dialysis intensity and hospice referral.

Co-morbidities – related terms: cardiovascular disease, diabetes mellitus. Additional chronic illnesses that compound CKD burden. The cumulative effect influences life expectancy, symptom load, and the balance between life-extending versus comfort-focused therapies.

Comfort-Focused Dialysis – related terms: symptom-guided prescription, short-daily sessions. Modification of dialysis parameters (time, flow rates) to prioritize relief of symptoms such as dyspnea, edema, or pruritus, rather than strict clearance targets.

Congestive Heart Failure (CHF) – related terms: volume overload, cardiorenal syndrome. A common CKD complication where fluid accumulation worsens cardiac function. Management may involve adjusting

ultrafiltration, diuretics, or considering palliative diuresis when dialysis is limited.

Conservative Management – related terms: non-dialytic care, renal supportive care. An approach that forgoes dialysis, focusing on symptom control, nutritional support, and psychosocial care. It is a viable option for patients with limited life expectancy or who decline dialysis.

Continuity of Care – related terms: care coordination, case management. Ongoing, seamless delivery of services across settings (hospital, home, hospice). Essential for preventing gaps that could exacerbate pain, anxiety, or uncontrolled fluid overload.

Creatinine, Serum – related terms: eGFR calculation, muscle mass. Waste product of muscle metabolism; elevated levels indicate reduced kidney filtration. Trends help assess disease progression and inform timing of palliative discussions.

Culture of Shared Decision-Making – related terms: patient autonomy, team communication. An environment where clinicians actively involve patients and families in care choices, respecting values and preferences. Central to ethical palliative care in renal disease.

Dialysis Adequacy Indices – related terms: Kt/V, URR. Quantitative measures (e.G., Kt/V ≥ 1.2 For thrice-weekly hemodialysis) used to judge treatment effectiveness. In a palliative context, these indices may be de-emphasized in favor of patient-reported outcomes.

Dialysis Access Surveillance – related terms: flow monitoring, maturation assessment. Regular checks (e.G., Ultrasound, pressure measurements) to detect stenosis or infection early. Timely intervention prevents emergency hospitalizations that can disrupt comfort-focused care.

Dialysis Frequency – related terms: incremental dialysis, short-daily regimen. Number of sessions per week. Reducing frequency may lessen treatment burden and improve quality of life while still providing symptom relief.

Dialysis Modality – related terms: hemodialysis, peritoneal dialysis. The method by which solutes and fluid are cleared. Choice influences independence, mobility, and caregiver involvement; peritoneal dialysis may be preferable for home-based palliative care in selected patients.

Dialysis Prescription – related terms: ultrafiltration rate, dialysate composition. Tailored plan specifying session length, blood flow, dialysate concentration, and anticoagulation. Adjustments aim to balance symptom control with safety.

Dialysis Withdrawal – related terms: treatment cessation, end-of-life planning. The deliberate decision to stop dialysis, often accompanied by a plan for symptom management (e.G., Analgesia, diuretics). Requires clear communication, legal documentation, and multidisciplinary support.

Diuretic Therapy – related terms: furosemide, fluid balance. Medications that promote urine output, used to manage volume overload when dialysis is reduced or stopped. Dose titration should consider renal function and electrolyte status.

Dyspnea Management – related terms: opioid analgesics, oxygen therapy. Strategies to relieve breathlessness, a frequent symptom in advanced CKD due to fluid overload, anemia, or metabolic acidosis. Low-dose morphine or hydromorphone is often effective.

Elderly Renal Patients – related terms: geriatric assessment, polypharmacy. Older adults with CKD present unique challenges: Frailty, cognitive decline, and heightened sensitivity to dialysis stress. Tailored palliative approaches prioritize functional preservation.

End-of-Life Care Pathway – related terms: hospice referral, advance directives. Structured sequence of interventions from disease progression to death, ensuring symptom control, psychosocial support, and respect for patient wishes.

Enteral Nutrition – related terms: NG tube, protein-energy wasting. Feeding through the gastrointestinal tract to address malnutrition. In palliative renal care, the decision to initiate or continue enteral nutrition weighs benefits against potential discomfort and burden.

Estimated Glomerular Filtration Rate (eGFR) – related terms: CKD-EPI equation, creatinine. Calculated kidney function based on serum creatinine, age, sex, and race. Declining eGFR signals progression and may trigger palliative referral when Fluid Overload – related terms: pulmonary edema, weight gain. Excess extracellular fluid causing edema, hypertension, and dyspnea. Managed by ultrafiltration, diuretics, and dietary sodium restriction; in palliative care, the goal is comfort rather than strict euvolemia.

Geriatric Assessment Tools – related terms: Timed Up-and-Go, Mini-Cog. Instruments evaluating mobility, cognition, and social support. Findings inform dialysis suitability and the need for additional support services.

Glomerular Filtration Rate (GFR) Measurement – related terms: inulin clearance, radioisotope methods. Direct assessment of kidney filtration, rarely used clinically due to complexity. Provides accurate staging for research or when precise dosing of renally cleared drugs is required.

Hemodialysis (HD) – related terms: vascular access, dialyzer. Extracorporeal therapy that removes waste and excess fluid. In palliative care, session length and frequency may be reduced, and “comfort dialysis” protocols applied.

Hemodialysis Access Infection – related terms: catheter-related bloodstream infection, exit-site care. A serious complication that can cause sepsis, fever, and hospitalization. Prevention and early treatment are essential; in end-of-life care, a decision may be made to remove the access to avoid repeated infections.

Hemodialysis Membrane Biocompatibility – related terms: high-flux, synthetic polymers. The degree to which a dialyzer material triggers immune activation. More biocompatible membranes reduce inflammation and itching, enhancing patient comfort.

Hemoglobin Management – related terms: erythropoiesis-stimulating agents, iron supplementation. Maintaining hemoglobin (target 10–11 g/dL) improves energy and reduces dyspnea. In palliative care, aggressive correction may be de-escalated to avoid side effects.

Hemodialysis Ultrafiltration Rate – related terms: fluid removal, intradialytic hypotension. Rate (mL/kg/h) at which fluid is extracted. Excessive rates increase cardiovascular stress; slower rates improve tolerance for patients prioritizing comfort.

Hemodialysis-Associated Pruritus – related terms: cholestyramine, phototherapy. Chronic itching affecting up to 40 % of dialysis patients. Management includes topical emollients, antihistamines, and gabapentin; addressing pruritus markedly improves quality of life.

Health-Related Quality of Life (HRQoL) – related terms: KDQOL-36, SF-36. Multi-dimensional assessment of physical, mental, and social well-being. In renal palliative care, HRQoL scores guide treatment intensity and end-of-life planning.

Hospice Eligibility Criteria – related terms: life expectancy , palliative focus. Specific benchmarks (e.G., Refractory symptoms, declining functional status) that qualify a patient for hospice services, providing multidisciplinary support and reimbursement for comfort-focused care.

Hyperkalemia Management – related terms: kayexalate, dialysis emergent. Elevated serum potassium (>5.5 Mmol/L) causing arrhythmias. In palliative contexts, emergent dialysis may be avoided if risks outweigh benefits; alternative measures include dietary restriction, calcium gluconate, and insulin-glucose therapy.

Hyperphosphatemia – related terms: phosphate binders, dietary restriction. High serum phosphate leading to vascular calcification and pruritus. Management includes calcium-based or non-calcium binders, though pill burden may affect adherence in end-of-life care.

Hypocalcemia – related terms: calcitriol, calcium supplementation. Low serum calcium causing muscle cramps and tetany. Correction is balanced against risk of vascular calcification, especially in frail patients.

Informed Consent – related terms: capacity assessment, shared decision-making. Process ensuring patients understand risks, benefits, and alternatives before agreeing to dialysis or its withdrawal. Documentation is vital for legal and ethical integrity.

Integrated Palliative Care Model – related terms: concurrent care, multidisciplinary team. Approach where palliative services are introduced early alongside disease-directed therapy, improving symptom control and reducing unnecessary hospitalizations.

Interdisciplinary Team (IDT) – related terms: nephrologist, palliative specialist, social worker. Group of professionals collaborating to address medical, psychosocial, and spiritual needs. Regular case reviews ensure coordinated care plans.

Intravenous Iron Therapy – related terms: ferric gluconate, hemoglobin optimization. Used to treat anemia of CKD. In palliative care, iron may be limited to alleviate fatigue when it aligns with patient goals.

Kidney Disease Outcomes Quality Initiative (KDOQI) – related terms: clinical practice guidelines, CKD staging. National body that issues evidence-based recommendations for CKD management, many of which inform palliative decision thresholds.

Kidney Transplantation – related terms: living donor, immunosuppression. Curative option for end-stage renal disease. In palliative contexts, transplantation is generally not pursued; however, discussions may arise for younger patients with limited comorbidities.

Late-Stage CKD – related terms: Stage 5, eGFR. Phase where symptoms become prominent, and the choice between dialysis and conservative management becomes urgent.

Life-Sustaining Treatment – related terms: mechanical ventilation, cardiopulmonary resuscitation. Interventions that maintain physiological function. In renal palliative care, decisions about continuation hinge on patient values and expected benefit.

Medication Reconciliation – related terms: polypharmacy, drug-drug interactions. Systematic review of all medicines a patient takes, ensuring appropriateness and deprescribing when burdens outweigh benefits.

Metabolic Acidosis – related terms: bicarbonate supplementation, dialysis. Accumulation of acids leading to fatigue, bone disease, and respiratory compensation. Oral sodium bicarbonate may be used when dialysis is limited, but dosing must consider volume status.

Minimal Clinically Important Difference (MCID) – related terms: patient-reported outcome, symptom score. Smallest change in a measurement that patients perceive as beneficial. Helps evaluate effectiveness of palliative interventions.

Nephrotoxicity – related terms: aminoglycosides, contrast agents. Drug-induced kidney injury. Awareness is crucial when prescribing analgesics or imaging studies for palliative patients.

Nephrology-Palliative Care Interface – related terms: collaborative clinics, referral pathways. Points where renal specialists and palliative teams intersect, ensuring seamless transition from curative to comfort-focused care.

Nephrology Training in Palliative Care – related terms: curriculum development, competency frameworks. Educational initiatives that equip nephrologists with skills in symptom management, communication, and ethical decision-making.

Non-Dialytic Fluid Management – related terms: dietary sodium restriction, diuretics. Strategies to control volume status without dialysis, essential when dialysis is withdrawn or deemed burdensome.

Nutrition Assessment Tools – related terms: Subjective Global Assessment, MNA-SF. Instruments to evaluate risk of malnutrition, guiding interventions such as oral supplements or counseling.

Opioid Rotation – related terms: equianalgesic dosing, tolerance. Switching from one opioid to another to improve pain control or reduce side effects. Critical in renal patients where accumulation of active metabolites can cause toxicity.

Oral Antihypertensives – related terms: ACE inhibitors, calcium channel blockers. Blood pressure control reduces cardiovascular strain. In palliative care, dose reduction may be appropriate to avoid hypotension.

Patient-Centered Goals of Care – related terms: values clarification, goal-setting. Explicit statements about what the patient hopes to achieve (e.G., Staying at home, avoiding hospitalizations). Guides all subsequent clinical decisions.

Palliative Care Consult – related terms: trigger criteria, symptom expertise. Formal request for specialist input, often when pain, dyspnea, or psychosocial distress become refractory.

Palliative Dialysis – related terms: low-flux, low-intensity, symptom-directed. Dialysis performed primarily to alleviate symptoms rather than to prolong life, employing gentler prescriptions.

Peritoneal Dialysis (PD) – related terms: CAPD, automated PD. Home-based modality using the peritoneal membrane for solute exchange. Advantages in palliative care include flexibility and avoidance of vascular access, though caregiver burden must be considered.

Peritoneal Dialysis Catheter Care – related terms: exit-site hygiene, peritonitis prevention. Maintaining sterility reduces infection risk, a key concern when patients have limited life expectancy.

Peritonitis – related terms: PD infection, gram-negative organisms. Inflammation of the peritoneum, presenting with abdominal pain and clouded effluent. Prompt treatment is vital; however, recurrent episodes may prompt transition to conservative management.

Pharmacokinetics in CKD – related terms: drug clearance, dose adjustment. Renal impairment alters absorption, distribution, metabolism, and excretion. Many analgesics (e.G., Morphine) have active metabolites that accumulate; dose reductions or alternative agents are often required.

Phosphate Binders – related terms: sevelamer, calcium acetate. Medications that reduce intestinal phosphate absorption. In palliative care, the pill burden may be minimized if hyperphosphatemia is not causing symptoms.

Polypharmacy – related terms: deprescribing, medication review. Use of multiple drugs, increasing risk of adverse events. Regular review is essential to align therapy with comfort-focused goals.

Pruritus Assessment Tools – related terms: Itch Severity Scale, VRS. Structured questionnaires to quantify itching intensity and impact, guiding treatment effectiveness.

Prognostic Scoring Systems – related terms: Manchester Score, REIN score. Algorithms that combine clinical variables (age, albumin, comorbidities) to estimate survival. Useful for timing palliative referrals.

Protein-Energy Wasting (PEW) – related terms: malnutrition, inflammation. Loss of body protein and energy stores, common in CKD, leading to frailty and poor outcomes. Nutritional interventions may be limited by patient preference in palliative care.

Psychosocial Support – related terms: counseling, family meetings. Services addressing emotional, social, and spiritual distress. Integration improves coping and reduces anxiety for patients and caregivers.

Quality-Adjusted Life Years (QALY) – related terms: health economics, utility values. Metric combining

quantity and quality of life. While useful for policy, individual palliative decisions prioritize patient-reported outcomes over QALY calculations.

Radiologic Imaging in Advanced CKD – related terms: contrast-induced nephropathy, low-dose protocols. Imaging may be necessary for symptom evaluation but requires careful choice of contrast agents and dose to avoid further renal injury.

Renal Anemia – related terms: erythropoietin, iron deficiency. Anemia due to reduced erythropoietin production. Treatment improves fatigue but may be limited by cardiovascular risk in frail patients.

Renal Bone Disease – related terms: secondary hyperparathyroidism, osteitis fibrosa. Disturbances in calcium, phosphate, and PTH leading to bone pain and fractures. Management includes vitamin D analogs and phosphate binders, balanced against pill burden.

Renal Replacement Therapy (RRT) – related terms: dialysis, transplant. Any therapy that replaces kidney function. Decision to initiate RRT versus conservative care is a central palliative consideration.

Renal Supportive Care – related terms: symptom management, advance care planning. Holistic approach that integrates nephrology and palliative principles to address physical, emotional, and spiritual needs throughout the disease trajectory.

Renal Symptom Burden – related terms: pruritus, fatigue. Composite measure of how kidney-related symptoms affect daily life. High burden often triggers referral to palliative services.

Renin-Angiotensin-Aldosterone System (RAAS) Blockade – related terms: ACE inhibitors, ARB. Medications that reduce proteinuria and blood pressure. May be tapered in late-stage disease to avoid hypotension.

Resuscitation Orders – related terms: DNR, physician orders for life-sustaining treatment (POLST). Legal documents specifying whether cardiopulmonary resuscitation will be performed. Must align with patient goals and be revisited as condition changes.

Risk Stratification for Hospitalization – related terms: previous admissions, fluid overload. Predictive models identifying patients at high risk of acute events, prompting proactive palliative interventions.

Self-Management Education – related terms: dietary counseling, fluid restriction. Teaching patients skills to monitor weight, blood pressure, and symptoms, empowering them to participate in care decisions.

Serum Electrolyte Monitoring – related terms: potassium, phosphate. Regular lab checks to detect life-threatening imbalances, especially when dialysis frequency is reduced.

Shared Decision-Making Tools – related terms: decision aids, values clarification worksheets. Structured resources that present options, benefits, and risks in understandable language, facilitating informed choices.

Symptom-Directed Dialysis – related terms: targeted ultrafiltration, pruritus relief. Adjusting dialysis prescription to specifically alleviate a dominant symptom, such as increasing fluid removal to ease dyspnea.

Symptom Burden Scales – related terms: ESAS, POS. Instruments rating severity of pain, nausea, anxiety, etc.,

Used to track response to palliative interventions.

Therapeutic Goals Review – related terms: goal-concordant care, plan of care. Periodic reassessment of what the patient hopes to achieve, ensuring treatment remains aligned with evolving preferences.

Thromboembolic Prophylaxis – related terms: low-molecular-weight heparin, compression stockings. Preventing clot formation in vascular access or deep veins. In palliative care, prophylaxis may be discontinued if it adds burden without clear benefit.

Transition of Care – related terms: discharge planning, home health services. Coordination when moving between settings (hospital to home, hospice enrollment). Essential to maintain symptom control and avoid fragmented care.

Uremic Frost – related terms: skin manifestation, advanced uremia. Crystalline deposits of urea on skin, indicating severe toxin accumulation. Prompt dialysis or intensified symptom management is required, but in palliative contexts, comfort measures may be prioritized.

Uremic Pruritus – related terms: CKD-associated itching, gabapentin. Chronic itch caused by toxin accumulation, often refractory to antihistamines. Gabapentin, pregabalin, or phototherapy can provide relief.

Uremic Encephalopathy – related terms: confusion, seizures. Neurological dysfunction due to high toxin levels. May be mitigated with dialysis; if dialysis is withdrawn, focus shifts to safety, orientation aids, and family support.

Vascular Access Planning – related terms: AVF creation, access preservation. Early identification of optimal access type and site. In patients opting for conservative care, access may be delayed or avoided.

Volume Management Strategies – related terms: dry weight assessment, diuretic titration. Determining target fluid status to minimize edema and hypertension while avoiding intradialytic hypotension. Tailored to patient comfort goals.

Wasting Syndrome – related terms: cachexia, muscle loss. Progressive loss of weight and muscle mass, common in advanced CKD. Nutritional support may be limited by patient desire for minimal interventions.

Withdrawal of Life-Sustaining Therapies – related terms: ethical framework, family counseling. Structured process for discontinuing interventions such as dialysis, ventilation, or vasopressors, ensuring dignity and symptom control.

Whole-Body Symptom Assessment – related terms: comprehensive review, interdisciplinary input. Systematic evaluation of pain, breathlessness, fatigue, depression, and spiritual distress, forming the basis for individualized palliative care plans.