

Kidney Supportive Care

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Topics

- ▶ Kidney Supportive Care
- ▶ Principles Of Palliative Care
- ▶ AKI in Patients With Other Serious Illness
- ▶ Withdrawal From Dialysis

Kidney Supportive Care

- Kidney supportive care is palliative care for patients with kidney disease
- The goal is reduction of suffering throughout the trajectory of illness, including the end of life

Kidney Supportive Care

- Kidney supportive care is ideally provided through collaboration of nephrologists (who use “primary palliative care” skills)
- Palliative care specialists, whose approach usually includes an interprofessional team with nurses, social workers, dietitians, and chaplains

Kidney Supportive Care

- Intensive symptom management
- Heightened attention to nonphysical dimensions of suffering
- Iterative and patient-centered explorations of prognostic awareness
- Elicitation of patient preferences
- Managing advancing disease without dialysis

Kidney Supportive Care

- Patients with advanced age or comorbid illnesses experience high mortality rates and high symptom burdens on dialysis
- Patients older than 80 years, some observational studies have shown no survival benefit with starting dialysis as compared with active medical management

Principles Of Palliative Care

1. Identification of patients most likely to benefit from supportive care
2. Symptom assessment and management
3. Communication of prognosis
4. Shared decision making to advance goal-concordant care
5. Effective use of local palliative medicine and hospice resources

Kidney Supportive Care

Symptom Management

Physical

Psychological

Spiritual / Existential

End of Life Care

Optimal use of hospice

Maximize dignity

Bereavement support

Expert Communication

Prognosis sharing

Shared decision-making

Advance care planning

Option of Comprehensive Conservative Care

Continue CKD care without dialysis

Maximize quality and quantity of life

Interdisciplinary Team Support

Nephrologist

Palliative Care Specialist

Nurse

Dietician

Chaplain

Social Worker

Table 1. Primary and Specialty Palliative Care in Nephrology

Domain of Care	Primary Palliative Care by Nephrology Team	Specialty Palliative Care Consultation
Symptom management	Routine symptom assessment and treatment	Refractory symptom treatment, including pain, neuropathy, itch, nausea, and anxiety/depression
Decision making	Communication about patient priorities, prognosis, dialysis modality options	Assistance with navigation of complex clinical situations or interpersonal dynamics
Interdisciplinary team support	Screening for social, spiritual, or nutritional distress	Access to dietitians, chaplains, and social workers trained in palliation
Conservative care	Medical CKD management with focus on quality of life	Assistance with advance care planning and end of life care

Symptom Management

- ▶ Evaluation for cause
- ▶ Reversible factors
- ▶ Level of distress or dysfunction caused by symptoms
- ▶ Nonpharmacologic and pharmacologic intervention options
- ▶ Expectation management
- ▶ Acknowledgement of limitations of therapy

Case 1:

- ▶ A 48-year-old man with ADPKD who received a deceased donor kidney transplant develops post transplantation lymphoproliferative disorder
- ▶ He is treated with R-CHOP (rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone)
- ▶ Toward the end of his treatment he develops severe pain in his feet and hands
- ▶ The pain is bilateral, worse at night, and feels like “electric shocks.” It prevents him from sleeping.

Question 1:

- ▶ Which of the following is NOT a therapeutic tool for the treatment of neuropathy?
- ▶ a) Gabapentin
- ▶ b) Subcutaneous lidocaine
- ▶ c) Methadone
- ▶ d) Duloxetine
- ▶ e) Ketorolac

Neuropathy

- ▶ Neuropathy is common in patients with kidney disease
- ▶ The first step in treating neuropathy is determining the cause
- ▶ The first-line pharmacologic treatment for neuropathy is a calcium channel alpha-2-delta ligand (gabapentin or pregabalin)

Table 3. Treatments for Neuropathy in Patients With Kidney Disease

Class	Agents	Starting Doses	Most Common Adverse Effects
Calcium channel alpha-2-delta ligands ^a	Gabapentin Pregabalin	Gabapentin: 100 mg daily at night (if on dialysis, reduce to 100 mg 3×/wk after dialysis) Pregabalin: 25 mg daily at night (if on dialysis, reduce to 25 mg 3×/wk after dialysis)	Dizziness, drowsiness, edema, ataxia
Serotonin-norepinephrine reuptake inhibitors	Duloxetine Venlafaxine (extended release) Tramadol	Duloxetine: 30 mg daily (if on dialysis, avoid) Venlafaxine: 37.5 mg daily Tramadol: 50 mg every 8-12 h	Headache, drowsiness, dry mouth, nausea, insomnia, withdrawal syndromes
Tricyclic antidepressants	Amitriptyline	10 mg daily at night	Dry mouth, urinary retention, blurred vision, change in libido, dizziness, weight gain, insomnia
Voltage-gated sodium channel blockers	Lidocaine ^b Mexiletene ^b	Lidocaine: weight-based Mexiletene: 150 mg 1-2×/d	Dizziness, ataxia, nervousness, tremor, arrhythmia
Opioids	Methadone ^b	2.5 mg every 8-12 h	Constipation, weight gain, delirium, sexual dysfunction, prolonged QTc
Topical agents	Lidocaine patch Capsaicin	Lidocaine: 1 patch every 12 h; can wear up to 3 patches at a single time Capsaicin: 0.025% ointment, compounded with menthol when available	Numbness (lidocaine), burning (capsaicin)

Case 2:

- ▶ A 63-year-old woman with advanced CKD. She is active on a waiting list for a kidney transplant.
- ▶ Her main concern is itch, which affects her upper arms, thighs, chest, and back
- ▶ It is worse at night and after showers
- ▶ On physical examination, there is no rash. The skin is dry and there are scattered excoriations
- ▶ Cr:4.1 mg/dL K:4.2 mg/Dl Bicarbonate:22 mEq/L serum urea nitrogen:39 mg/Dl Hb:11.1 g/dL Serum albumin:3.9 mg/dL ph:5.3 mg/dL
PTH:95 pg/mL

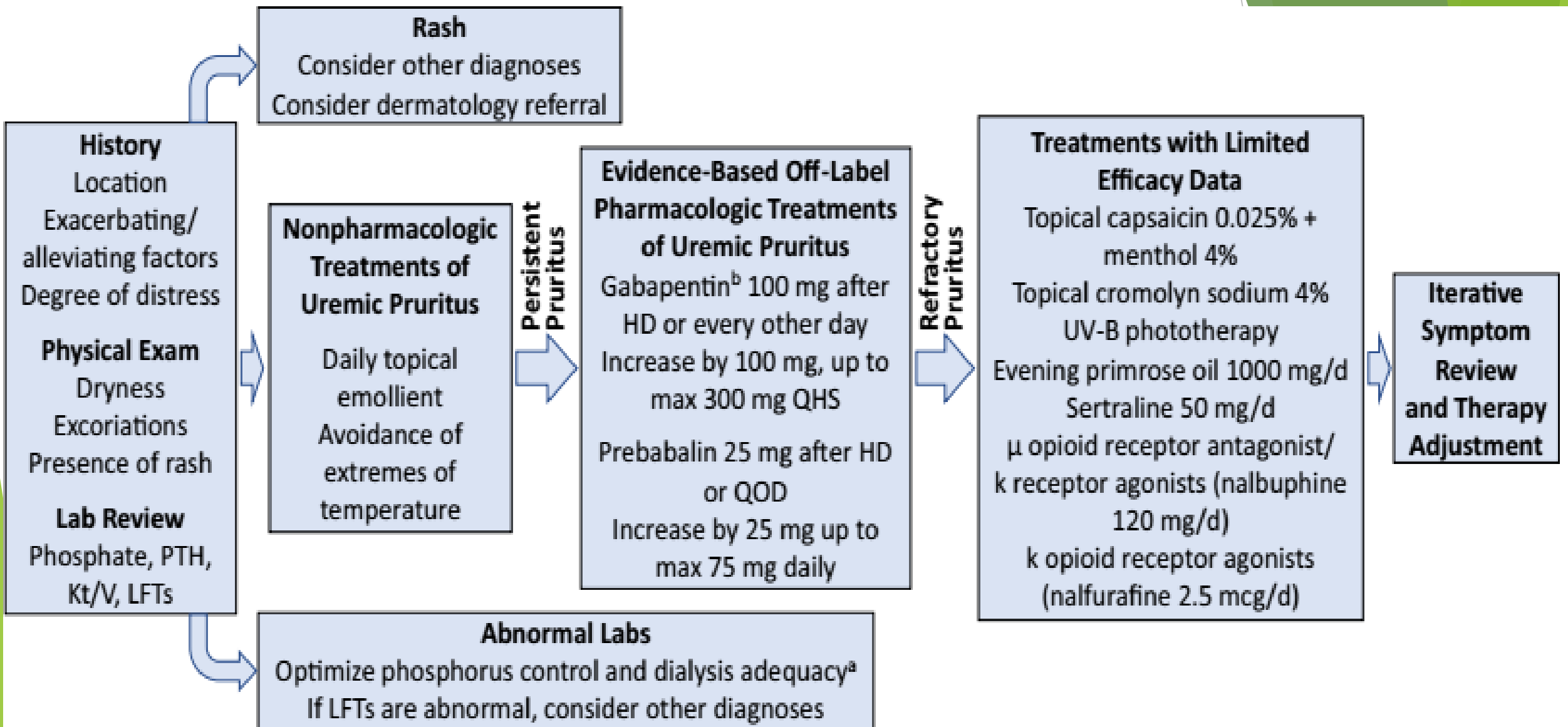
Question 2:

What is the best next step?

- a) Initiate dialysis
- b) Refer to dermatology
- c) Treat with topical emollients and low-dose gabapentinoids
- d) Treat with evening primrose oil
- e) Start UV light treatment

Pruritus

- ▶ Not only is itch common among people living with kidney disease, it is often severe enough to influence mood, sleep quality, interpersonal relationships, and overall health-related quality of life
- ▶ The first step is to confirm the diagnosis by history and physical examination



Depression

- ▶ Mental illness, including depression, is common among patients with kidney disease and associated with poor health outcomes
- ▶ Among patients receiving dialysis, depression is associated with increased mortality, higher hospitalization rates, longer lengths of stay, and higher rates of suicide
- ▶ SSRIs are considered first-line pharmacotherapy for depression in kidney disease

Symptom	Medication	Comments
Pain	1. Mild pain (1-3) - Dipyrrone or Paracetamol (max. of 3g daily)	Assess the cause of pain. Reduction of 20-30% in pain intensity is sufficient to improve HRQoL.
	2. Moderate pain (4-6) - Tramadol with reduced dose. On dialysis 50-100mg 2x / d (maximum dose). In conservative 5-50mg 2x / d (maximum dose). Some authors recommend skip step 2 in CKD.	Administer analgesic medication according to WHO principles: by mouth, by the clock, by the ladder, for the individual and with attention to detail.
	3. Severe Pain (7-10) - Fentanyl, Buprenorphine, Hydromorphone and Methadone are considered safe. Start with small doses.	Neuropathic or mixed pain requires another class of medications as SSRI, TCAs, and Gabapentinoids.
Uremic pruritus	Gabapentin	Remove other causes of pruritus.
	CKD stage 3 and 4 – start with 50-100 mg 1 – 2 h before sleep	Moisturizing is advisable.
	CKD stage 5 – start with 100mg on alternate nights	
	Dialysis – start with 100mg after each session and holder for efficacy and side effects	

and hold for efficacy and side effects

Restless legs syndrome

Gabapentin - as above

Dopaminergic agonist - ropinirole 0.5mg at night or pramipexole 0.25mg at night
If the patient presents with uremic pruritus and cramp prefer gabapentin

If the patient has uremic pruritus and cramps, prefer gabapentin.

Nausea and vomiting

First line: ondansetron 4–8 mg every 8 h as needed.

Second line: Metoclopramide 2.5 every 8 h as needed and before meals.

Third line: olanzapine 2.5 mg every 8 h as needed or haloperidol 0.5 mg every 8 h as needed.

Multifactorial in origin. Metoclopramide acts as a central and peripheral antiemetic (uremic and diabetic gastroparesis).

Constipation

Bisacodyl or Senna

Add fiber to diet.

Check for medications that cause constipation.

Dyspnea

Hydromorphone - start at 0.5mg 4x / d and increase if tolerated

Morphine 2.5mg 4x / day for 2 to 3 days

Exclude reversible causes

Anorexia	Remove precipitants Diet review Supplements	Multifactorial
Fatigue	Treat the reversible causes	Multifactorial
Anxiety	Counseling Psychologist / Psychiatrist evaluation If panic attack consider Benzodiazepines - Lorazepam 0.5mg to 1mg.	Multifactorial
Depression	Some SSRIs as Citalopram, Fluoxetine and Sertraline are safe for use in CKD	Difficult to diagnose because the symptoms of depression seem those of the DRCT. Consider Psychiatrist evaluation.
Sleep disturbance	Assess the cause carefully Treat the cause Temazepam 10-20 mg at night	If sleepapnea is suspected-polysomnography

Issue	Current Disease-Focused Metrics for Conventional Dialysis Care	A Patient-Centered and Palliative Approach to Dialysis Care
Vascular access	Creation and maintenance of an AV fistula	CVC is acceptable
Dialysis adequacy	Target small solute clearance based on current standards (Kt/V.1.2 for HD and Kt/V.1.7 for PD), intensifying the dialysis prescription as needed to achieve targets	Lower clearance acceptable if changes prescription increase demands inconsistent with patient preference. Tailor dialysis to minimize symptoms and treatment burden.
Cardiovascular disease	Treat CV risk factors, potentially targeting BP and dyslipidemia	Tolerate hypertension to avoid symptoms; limited use of medication to treat hypertension and dyslipidemia treatment
Mineral and bone disorder	Dietary counseling; binders to control hyperphosphatemia; vitamin D analogues with or without calcimimetics for secondary hyperparathyroidism	Limited restrictions; more permissive hyperphosphatemia and hyperparathyroidism
Nutrition	Encourage dietary protein intake while limiting potassium (if HD), sodium, and phosphorus intake	Dietary restrictions only to mitigate symptoms and improve quality of life.
Laboratory monitoring	Routine monthly laboratory tests	Minimal necessary
Drugs	Prescribed for treatment and prevention	Prescribed primarily to improve HRQoL or symptoms relief
Anemia management	IV iron and ESAs to achieve targets for Hb and TSAT/Ferritin	IV iron and ESAs only as needed
Symptom management	Only as needed	In a regular base

Case 3:

- ▶ An 82-year-old man presents for follow-up of advanced CKD
- ▶ Past Hx : hypertension, coronary artery disease, heart failure with preserved ejection fraction, and peripheral arterial disease
- ▶ GFR : 8 mL/min/1.73 m² Last
- ▶ He notes dry mouth and progressive blandness in the taste of food
- ▶ BP:158/78 mm Hg Ankle edema (1+) He denies shortness of breath
- ▶ K:5.3 mmol/L bicarbonate :17 mmol/L ionized Ca:1.0 mmol/L Ph:6.1 mg/dL,
- ▶ PTH:400 pg/dL Hb:9.7 g/dL
- ▶ DHx : amlodipine, carvedilol, furosemide, aspirin, atorvastatin, calcitriol, sevelamer, sodium bicarbonate, and darbepoetin every 2 weeks

Question 3:

What is most appropriate at this time?

- a) Revisit whether he wants to start dialysis
- b) Set up regular home intravenous sodium bicarbonate infusions
- c) Intensify diuretics to address edema and hypertension
- d) Intensify phosphorus control by increasing binders and dietary restrictions
- e) Review medications and deprescribe if possible

Active Medical Management of Advanced CKD in the Outpatient

- ▶ In some populations, particularly those with ischemic heart disease and those older than 80 years at dialysis initiation, the survival advantage with dialysis has been shown to be modest or absent
- ▶ As illness progresses, the focus of care may shift entirely to symptom management

AKI in Patients With Other Serious Illness

- ▶ Understand the clinical picture
- ▶ Assess the renal prognosis
- ▶ Arrange meeting with patient, family, and other key members of care team
- ▶ Align patient goals and values with treatment plan

AKI in Patients With Other Serious Illness

- ▶ Understand the clinical picture
 - Review the medical record and confer with other members of care team to understand the expected trajectory and treatment options for the underlying illness (cancer, cirrhosis, etc)
 - Are there disease-specific treatment

AKI in Patients With Other Serious Illness

▶ Assess the renal prognosis

- Limited kidney injury (ATN) vs ongoing kidney injury (eg, tumor lysis, toxicity of needed medication, decreased effective arterial blood volume)
- Symptoms
- Functional Status
- Quality of life
- Prognosis

AKI in Patients With Other Serious Illness

- ▶ Arrange meeting with patient, family, and other key members of care team
- ▶ Align patient goals and values with treatment plan

Withdrawal From Dialysis

- ▶ Withdrawal from dialysis is the third most common cause of death of patients with kidney failure after cardiovascular disease and infection
- ▶ Early recognition of those who are more likely to withdraw may improve end-of-life care
- ▶ Individual survival time varies greatly, with a mean of 7.4 (range, 0-40) days

Withdrawal From Dialysis

- ▶ When considering withdrawal from dialysis, several factors need to be examined:
 - reasons for withdrawal
 - sources and reversibility of distress
 - decisional capacity of the patient,
 - support from family

Recommendations For Withdrawal Of Dialysis

1. Patients with decisional capacity, who are fully informed and make voluntary choices, refuse dialysis or request dialysis to be discontinued.

2. Patients who have no more decision-making ability and who have previously expressed refusal to dialysis through appropriate ACP.

3. Patients who are no longer able to make decisions and whose legal representatives refuse dialysis or request that they be discontinued.

4. Patients with irreversible and profound neurological impairment, so that they do not show signs of thought, sensation, intentional behavior, and self-awareness and the environment.

5. Patients with clinical and functional deterioration, with evidence of intolerability to the dialysis procedure (maleficence).

Withdrawal From Dialysis

- ▶ If hypervolemia and postdialysis fatigue are significant sources of distress, alternative dialysis modalities including nocturnal dialysis and peritoneal dialysis should be considered
- ▶ It is important to emphasize that medical care will continue after stopping dialysis, with a focus on symptom management during the dying process

Symptoms And Therapeutic Measures In The Last Days Of Life

Symptom	Intervention
Nausea and vomiting	Haloperidol SC 0,5 to 1.0 mg 8 hourly Levomepromazine SC 2.5 to 5 mg hourly
Respiratory secretions	Hyoscine butilbromide SC 20 mg, hourly as required (up to 120 mg in 24h)
Anxiety and distress	Midazolam SC 2 mg as required hourly Lorazepam sublingual 0.5 mg 8 hourly as required
Dyspnea	Fentanyl 25–50 µg subcutaneous 2 hourly as required (first choice) Morphine 1.5–2.5 mg sub subcutaneous cut 2 hourly as required Diuretic (if applicable), ventilator (in face), and relaxation techniques
Delirium	Haloperidol 0.5 mg to 2 mg 8 hourly
Terminal agitation	Midazolam SC 10 to 20 mg over 24 h plus midazolam SC 5 mg hourly, as required

Summery

- ▶ Identification of patients most likely to benefit from supportive care
- ▶ Symptom Management
- ▶ Withdrawal from dialysis and end-of-life care should be thought of as a small but important piece of the broad spectrum of kidney supportive care

Prescribing in renal supportive care

REVIEW ARTICLE | ARTIGO DE REVISÃO ■

Kidney supportive care: an update of the current state of the art of palliative care in CKD patients

Cuidados de suporte renal: uma atualização da situação atual dos cuidados paliativos em pacientes com DRC

Nephrology and Palliative Care Collaboration in the Care of Patients With Advanced Kidney Disease: Results of a Clinician Survey

Maureen Metzger, Jonathan Yoder, Kara Fitzgibbon, Leslie Blackhall, and Emaad Abdel-Rahman



Core Curriculum

AJKD

Kidney Supportive Care: Core Curriculum 2020

Samantha L. Gelfand, Jennifer S. Scherer, and Holly M. Koncicki



Thank You
For Your Attention

