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OUTPUT AND OUTCOME INDICATORS

An example of pain therapy and palliative care in nephropathy

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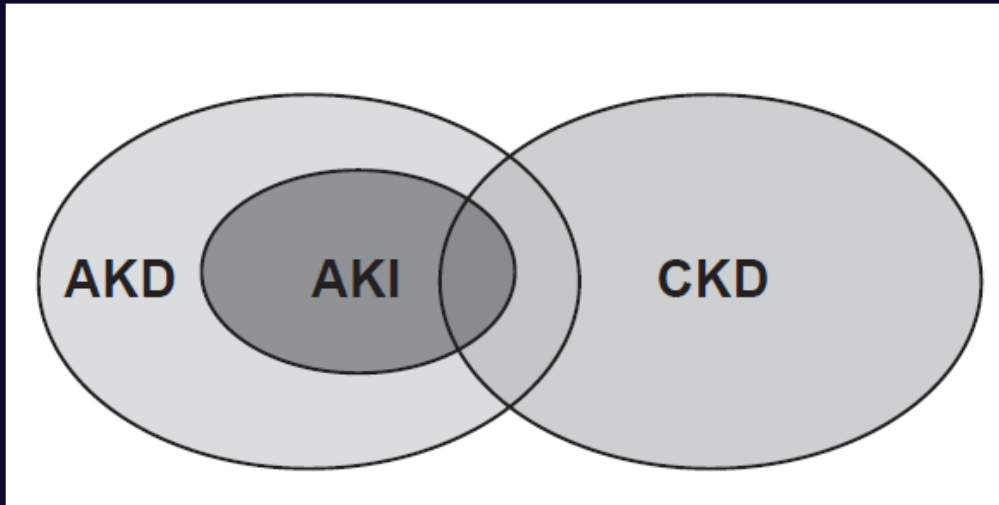
Palliative Care

...multidisciplinary approach to care which has been developed to support clinicians in the management of patients with serious illness...

**Quality of life of patients
and their families**

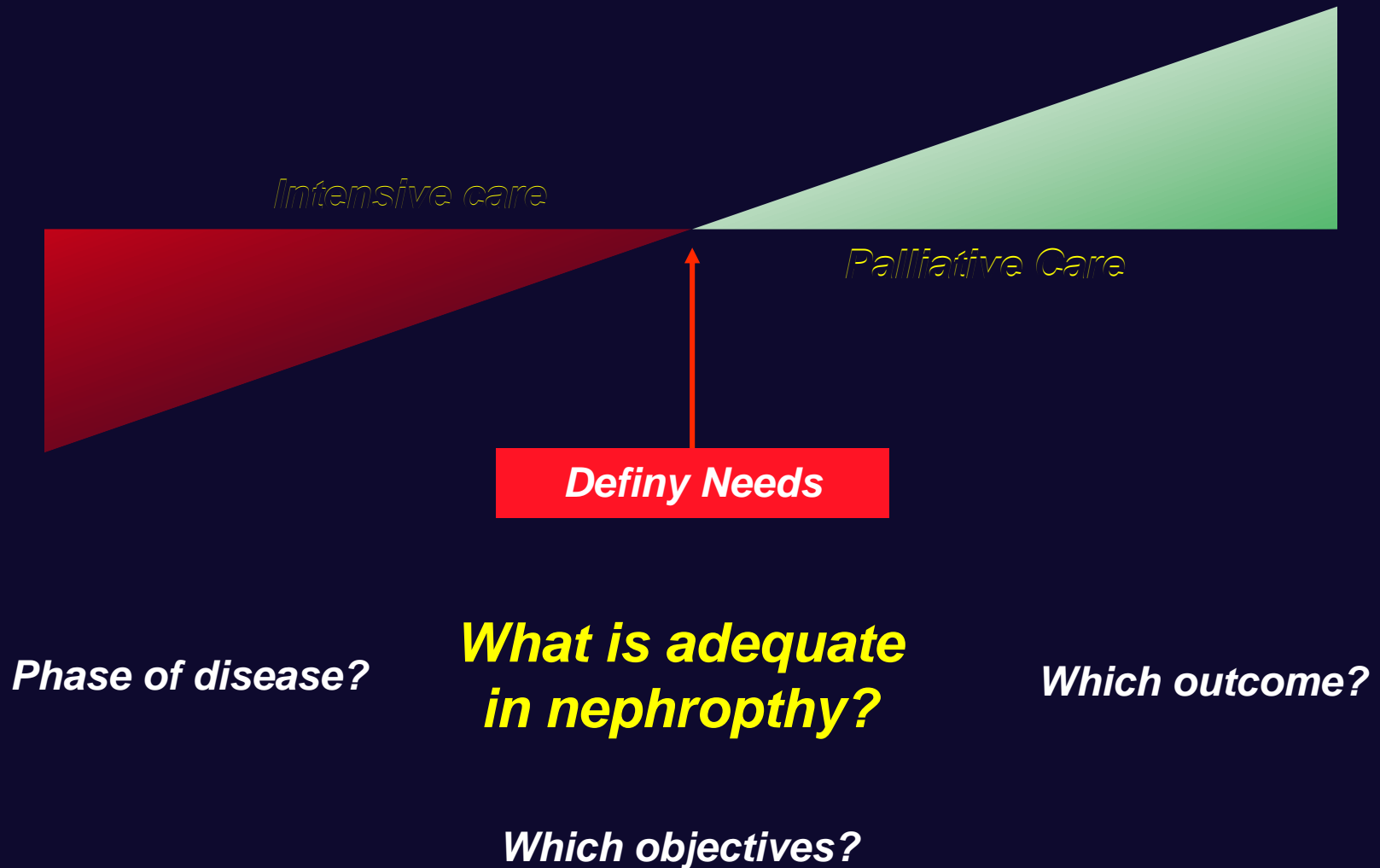
- 1) identification and management of patients' physical, psychological and spiritual symptoms;
- 2) evaluation of patients' clinical condition and prognosis to establish realistic and appropriate treatment goals;
- 3) arrangement of individualized therapeutic plans according to patients' wishes;
- 4) attention to families' needs and
- 5) support for health care providers

Palliative care for critical care patients

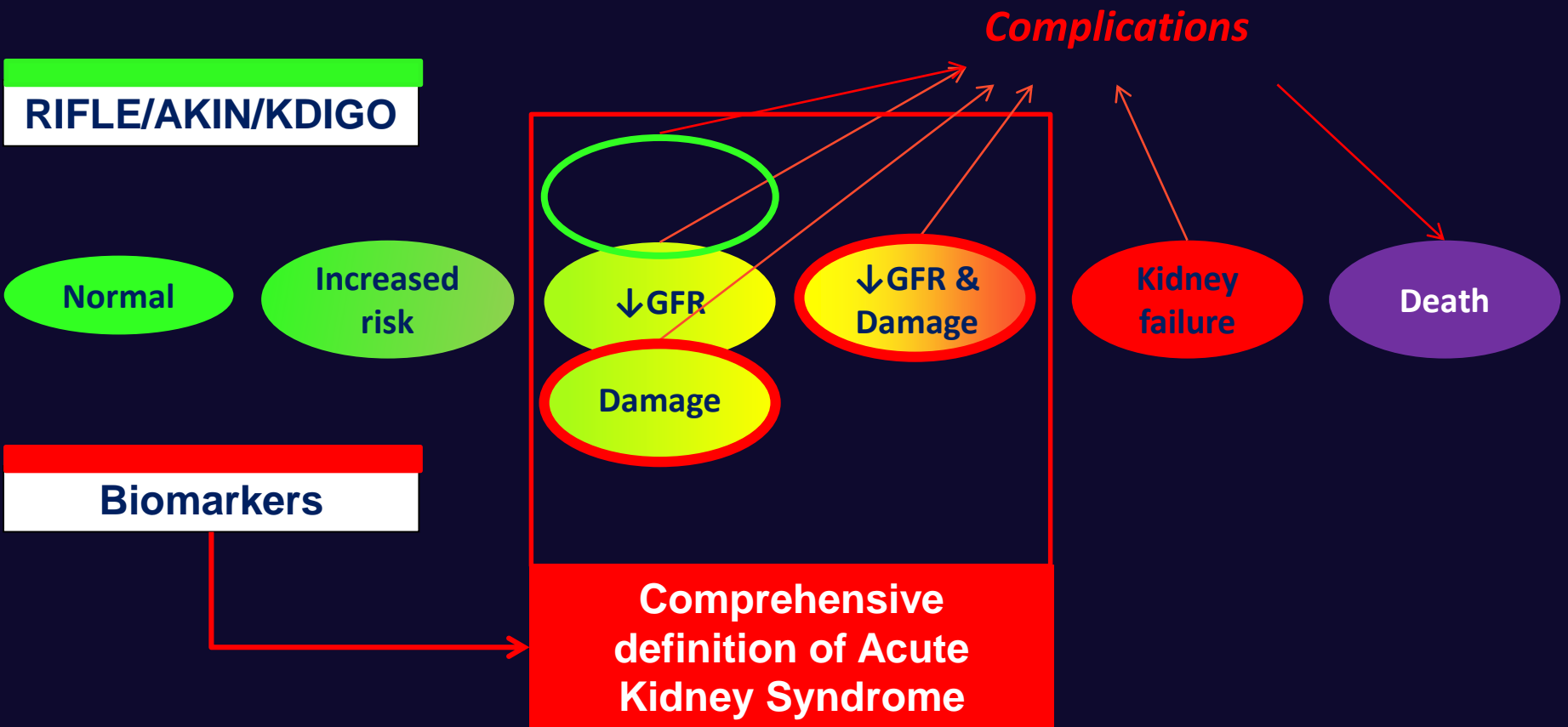


ESRD

Palliative care for critical care patients

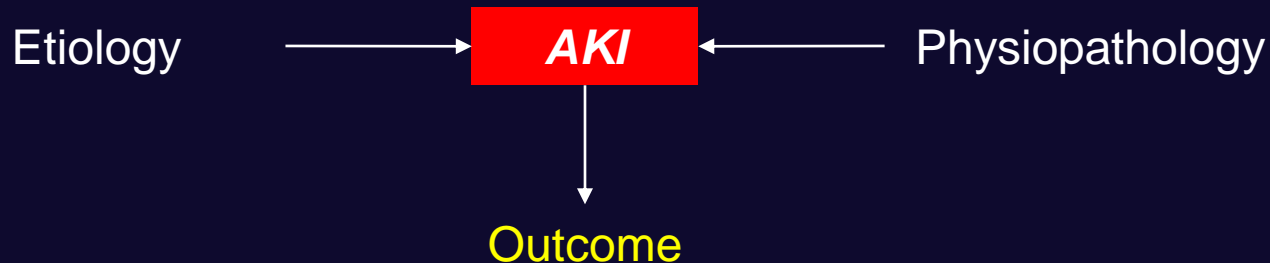


From AKI to CKD



Acute kidney injury

- AKI occurs in critically ill patients in the Intensive Care Unit (ICU), with an estimated global prevalence of 36%-67%; it exhibits different etiologies and several pathophysiological mechanisms, and is correlated with a high mortality rate



- Despite the poor prognosis associated with AKI, the concepts of palliative and hospice care are still underdeveloped for this specific subgroup of patients.

AKI and palliative care

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☐ [Decision-making in patients with cancer and kidney disease.](#)
1. Scherer JS, Swidler MA.
Adv Chronic **Kidney** Dis. 2014 Jan;21(1):72-80. doi: 10.1053/j.ackd.2013.07.005. Review.
PMID: 24359989
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☐ [Palliative medicine referral in patients undergoing continuous renal replacement therapy for acute kidney injury.](#)
2. Okon TR, Vats HS, Dart RA.
Ren Fail. 2011;33(7):707-17. doi: 10.3109/0886022X.2011.589946.
PMID: 21787162
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☐ [Acute kidney injury in critically ill patients with cancer.](#)
3. Benoit DD, Hoste EA.
Crit **Care** Clin. 2010 Jan;26(1):151-79. doi: 10.1016/j.ccc.2009.09.002. Review.
PMID: 19944280
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☐ [Pediatric RIFLE for acute kidney injury diagnosis and prognosis for children undergoing cardiac surgery: a single-center prospective observational study.](#)
4. Ricci Z, Di Nardo M, Iacoella C, Netto R, Picca S, Cogo P.

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☒ "Acute Kidney Injury" AND Palliative (49) PubMed

☒ "Acute Kidney Injury" AND ("Palliative care" OR "Palliative medic..." (49) PubMed

☒ Functional Status of Elderly Adults before and after Initiation of Dialysis

☒ NEJM 2009 dialysis functional status (1) PubMed

AKI and palliative care

“Acute Kidney Injury” AND (“Palliative care” OR “Palliative medicine”)

- 17 focused on “acute-on-chronic” conditions and advanced planning for ESRD patients;
- 32 couple AKI with other life-threatening conditions (e.g. heart failure or cancer) and underline the importance of palliative care medicine in these diseases;
- 8 focused on palliative care for nephropathic patients with AKI.
 - 5 review the ethical issues.
 - 3 describe the epidemiology and clinical factors associated with End-of-life in AKI patients

AKI and palliative care

...while palliative and hospice care are globally applied in CKD patients, even general indications are still lacking in AKI patients...

withdrawal or withholding of invasive CRRT

Guidelines?

```
graph LR; A[Guidelines?] --- B[local institutional practice, physicians' clinical judgment, available resources, local management];
```

local institutional practice,
physicians' clinical judgment,
available resources
local management

AKI and palliative care

Several factors taken into consideration during the decision-making process regarding the withholding or withdrawal of RRT in patients with AKI

- Clinical **feasibility**
Equipments? IHD vs CRRT? Technical and non-technical skills?
- An adequate medical judgment and an informed patient and family consent cannot ignore **survival prediction** as an important factor to be considered when deciding to continue, withhold or withdraw RRT.
 - Short term mortality 46-75%
 - Long term mortality (SUPPORT) → mean survival time in patients who required dialysis was of approximately 30 days and that only 27% of patients were alive after 5 months

AKI and palliative care

Several factors taken into consideration during the decision-making process regarding the withholding or withdrawal of RRT in patients with AKI

- Prediction of renal **functional recovery** after AKI should be considered as another important factor in determining long-term renal and non-renal outcomes
- The **Quality of life** of patients may be severely affected if ESRD occurs and chronic extracorporeal RRT is required after an episode of AKI.
SUPPORT study → AKI patients who survived to the critically ill stage showed a median of one dependence in activities of daily living
- **Patient's own wishes??**

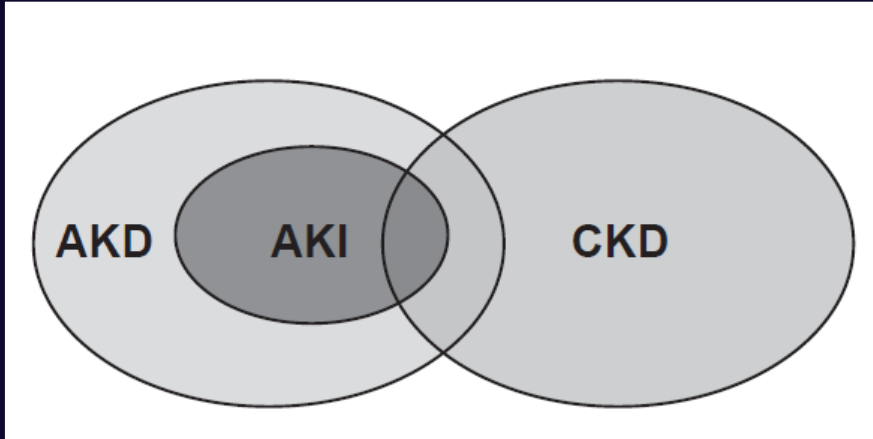
AKI and palliative care

TIME LIMITED TRIAL

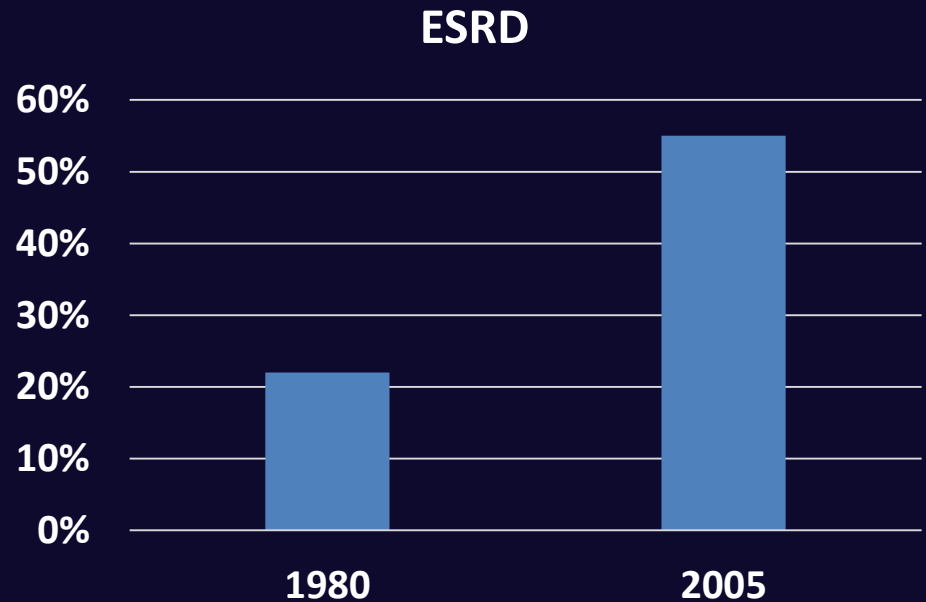
Useful when a disagreement in management occurs between physicians and nurses or patients' families.

End-points, goals and duration of this time-limited trial should be exactly defined in advance. In particular, specific criteria, their magnitude of change accepted as evidence for improvement and the time point of their evaluation should be established and agreed between physicians, nurses, patients and their families.

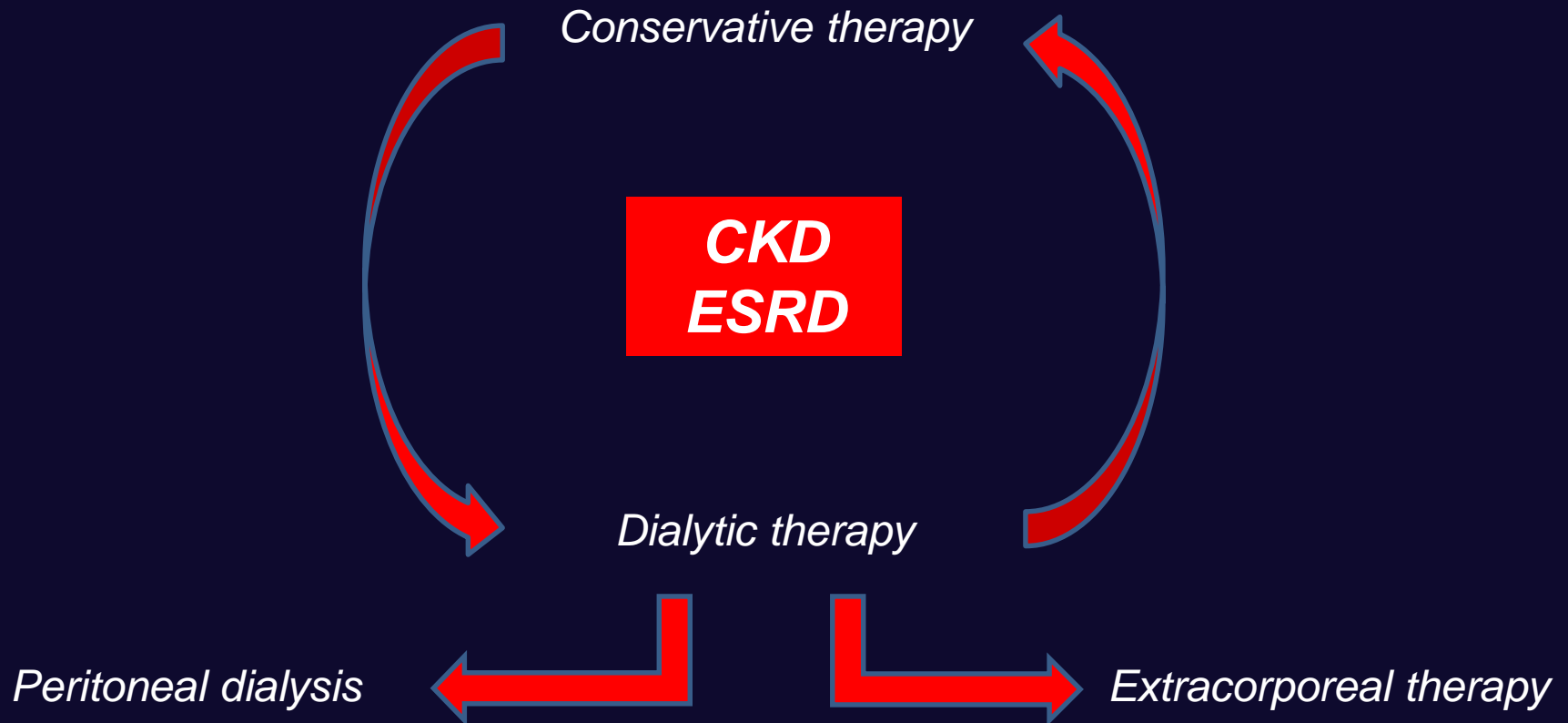
Chronic kidney disease



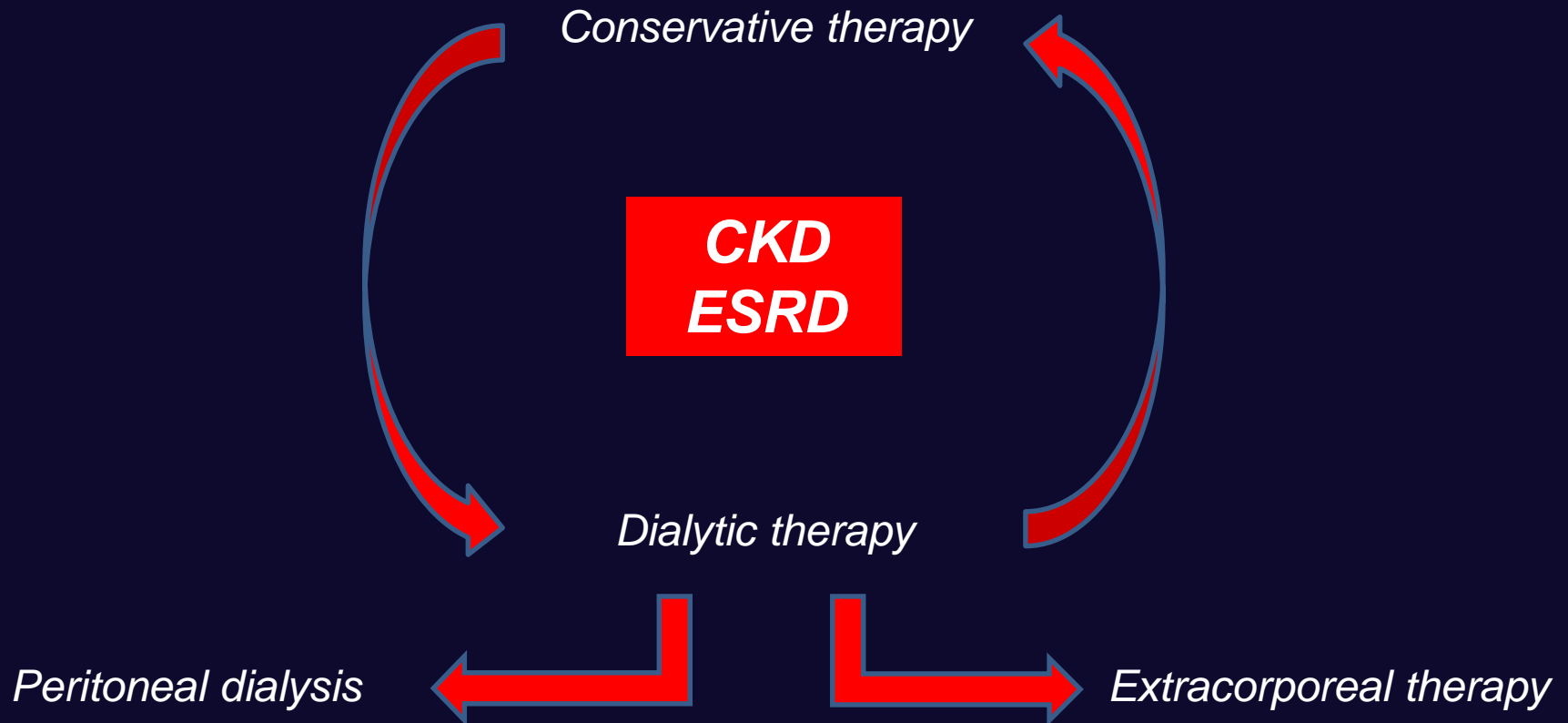
Mortality rate: 23%



CKD and palliative care



CKD and palliative care



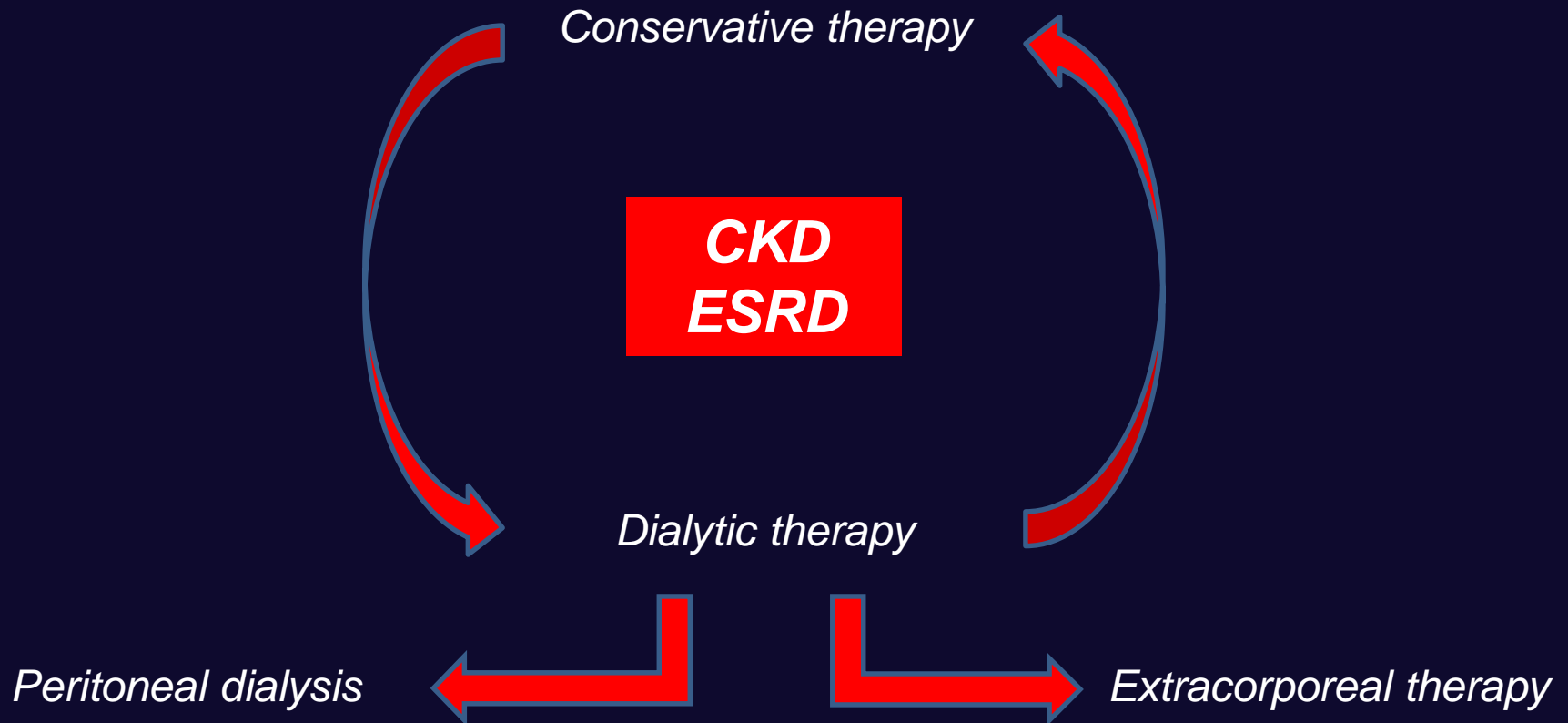
CKD and palliative care

Conservative therapy

Conservative management should be taken into account for patients who are not eligible for extracorporeal treatment or who refuse it.

It is based on a pharmacological and behavioral approach used to prevent the major complications of ESRD, such as hydro-electrolytic unbalance, acid-base disorders, hyperazotemia and anemia

CKD and palliative care



CKD and palliative care

Extracorporeal therapy

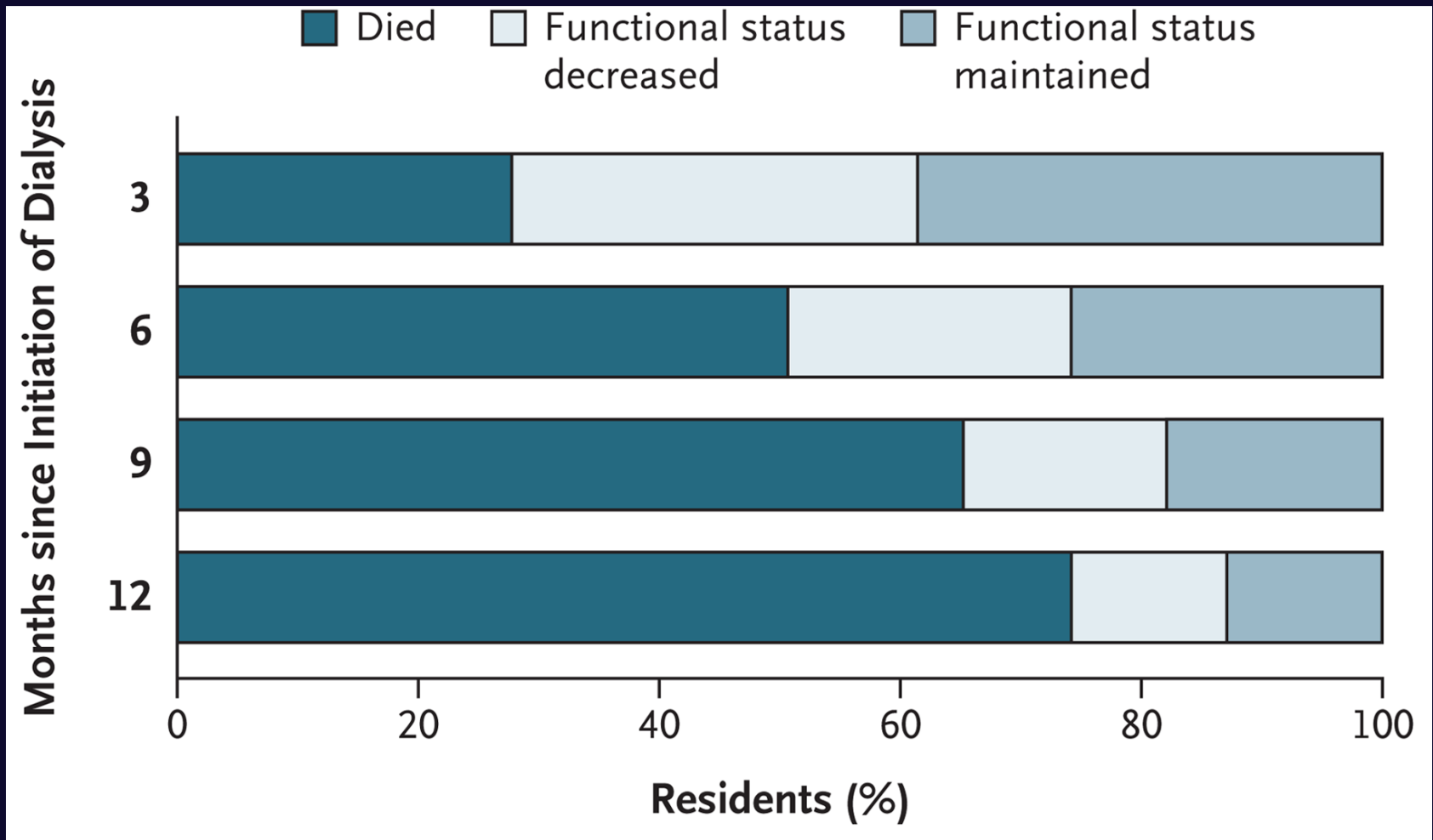
The most utilized treatment to replace the renal function in ESRD

Adequacy??

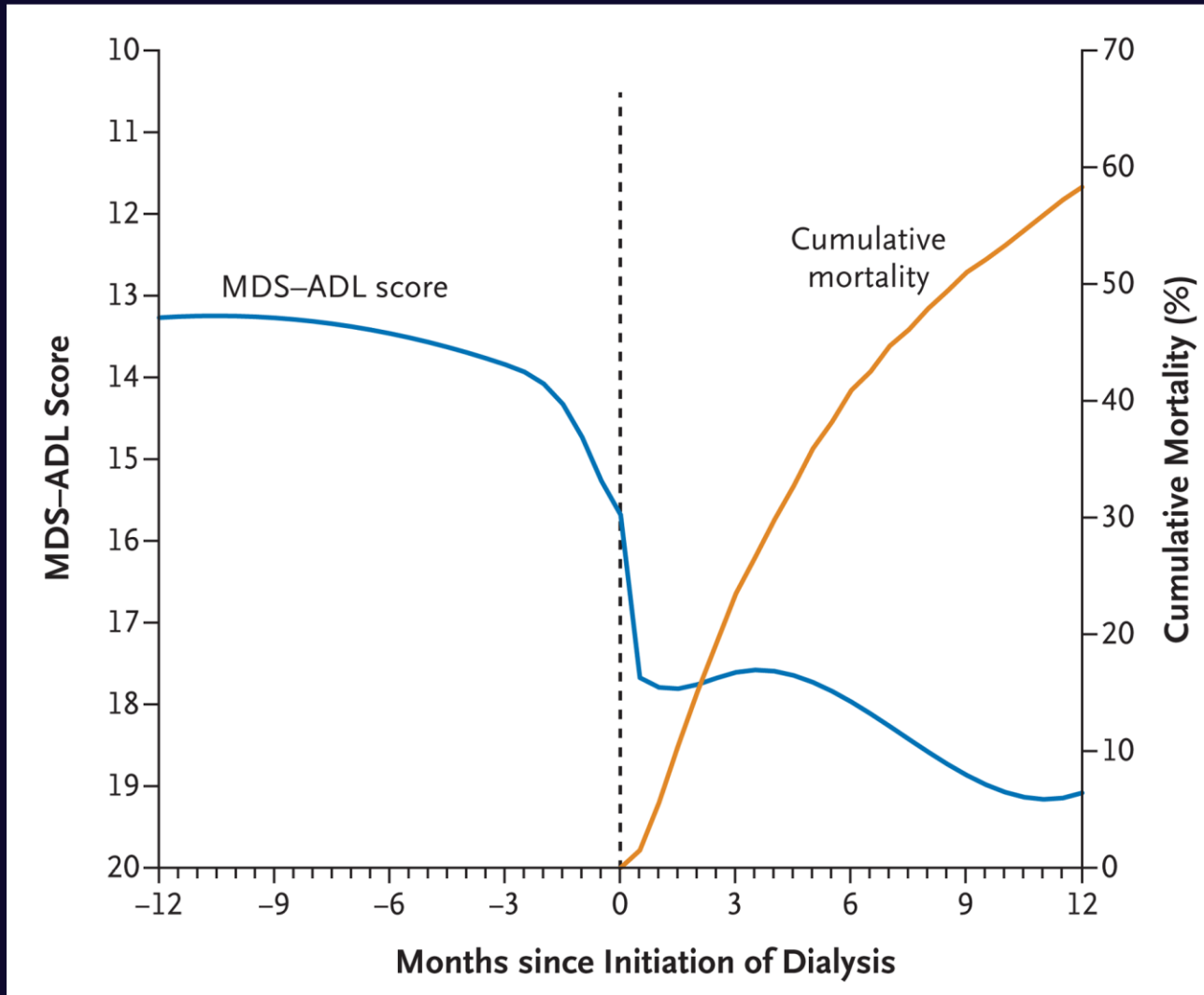
Clearance !!

Dialysis Outcomes and Practice Patterns Study (DOPPS) showed no difference in dialysis prescription across subgroups of patients with different clinical requirements. For instance, the same treatment time, normalized by body weight, was prescribed both for patients aged < 45 years and frail elderly patients

CKD and palliative care



CKD and palliative care



CKD and palliative care

PALLIATIVE DIALYSIS

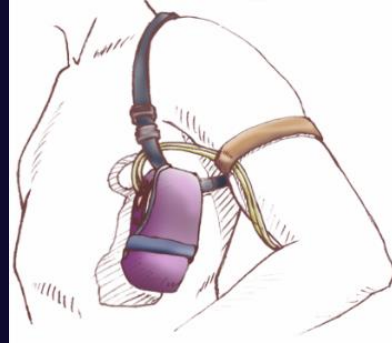
- physical symptoms,
- emotive,
- autonomy-related issues,
- communication
- completion of life affairs-related issues,
- Economic burden and other practical issues and transcendent spiritual issues

Dyspnea?

Perception of care?

Social issue?

CKD and palliative care



CKD and palliative care

Wakman: The future in ambulatory ultrafiltration...



- Management of fluid overload in HF
- Dehospitalization of HF patients
- Reduction of rehospitalization
- Reduction of comorbidities
- Reduction of pharmacological load
- Improved quality of life
- Potential impact in cost savings

CKD and palliative care

Wakman: The future...in palliative care for nephropathic patients

