Decisions About Dialysis Initiation in the Elderly
• Prevalence CKD is highest in older ages
• elderly population is the fastest growing segment developing ESRD
• > 74 years old from 2000 to 2012 rate of ESRD has grown
  prevalence by 12.2%
  incidence by 44%
Incident counts & adjusted rates, by age

Figure 2.5 (Volume 2)

Incident ESRD patients; rates adjusted for gender & race.

USRDS 2009 ADR
• More older patients are starting dialysis
• But elderly patients with advanced CKD and ESRD are more likely to have greater disability, morbidity and worse survival compared with older patients with less advanced kidney disease
Decision to initiate renal replacement therapy (RRT) in frail elderly patients

• based on each patient’s values, goals, and care preferences
• managing advanced CKD
  viewed as an evolving conversation more than a discrete decision about dialysis initiation
The Case

• Mr. H. is an 80-year-old veteran with a history of progressive, nonproteinuric, Stage IV CKD presumed secondary to hypertension, a prior stroke with hemiparesis, chronic obstructive pulmonary disease, and coronary artery disease (left ventricular ejection fraction of 40%), who presents to his primary care provider for routine follow-up after a nephrology clinic appointment.
• eGFR of 17 mL/min
• lives at home with wife, primary caregiver
• wheelchair dependent
• requires assistance with transferring, bathing, and dressing
• Repeatedly remarked living in nursing home (even temporarily) unacceptable
• feels no choice but to start RRT kidneys fail
• Reservations
  burdening wife
  values current QOL-living at home, preserving functional status, and minimizing symptoms
1. Will dialysis help Mr. H. to live longer?

2. What are the alternatives to in-center hemodialysis?
• 3. What will his life be like with and without in-center dialysis?

   A. How will his time be spent if he elects to proceed with in-center hemodialysis (the predominant treatment modality in the U.S.)

   B. What will happen to Mr. H.’s functional status with and without in-center hemodialysis?

   C. What symptoms might Mr. H. expect with and without dialysis?
Will Dialysis Help Mr. H. to Live Longer?

- population-based study evaluating rates of dialysis initiation and survival in octogenarians and nonagenarians
  - increasing age
  - increasing comorbidity
  - nonambulatory status

- all associated with worse survival

• median survival < 16 months aged 80-84
• < 12 months aged > 85 years
• substantial heterogeneity

Comparative Survival of CKD Patients over 75 Years With and Without Dialysis

Kaplan-Meier survival curves for those with high comorbidity (score=2), comparing 5 dialysis and conservative groups (log rank statistics <0.001, df 1, P=0.98).

observational studies directly comparing survival Stage V CKD managed without dialysis or in-center hemodialysis

demonstrated survival advantage in patients undergoing dialysis

two studies did not show significantly longer survival with high comorbidity
 ischemic heart disease

poor baseline functional status survival no different
<table>
<thead>
<tr>
<th>Study</th>
<th>N</th>
<th>Dialysis</th>
<th>MM*</th>
<th>Median survival</th>
<th>Independent Predictors</th>
<th>Age (yrs)</th>
<th>GFR (ml/min)</th>
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<tbody>
<tr>
<td>Smith 2003</td>
<td>321</td>
<td>258</td>
<td>63</td>
<td>RRT MM</td>
<td>Age</td>
<td>Mean 61.5</td>
<td>&lt; 15 CG</td>
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<td>8.3 vs. 6.3 mo=NS</td>
<td>KPS</td>
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<td>Joly 2003</td>
<td>144</td>
<td>107</td>
<td>37</td>
<td>RRT MM</td>
<td>KPS</td>
<td>Mean 83</td>
<td>&lt;10 CG</td>
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<td>28.9 vs. 8.9 months P&lt;.001</td>
<td>Social Isolation</td>
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<td>Carson 2009</td>
<td>202</td>
<td>173</td>
<td>29</td>
<td>RRT MM</td>
<td>Age</td>
<td>≥70</td>
<td>≤30</td>
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<td>37.8 vs. 13.9 months P&lt;.001</td>
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<td>Murtagh 2007</td>
<td>129</td>
<td>52</td>
<td>77</td>
<td>RRT MM</td>
<td>Age</td>
<td>&gt;75 yrs</td>
<td>≤15</td>
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<td>MM 18 months</td>
<td>Comorbidity</td>
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<td>Stage 5</td>
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<td>Heart Disease</td>
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<td>Wong 2007</td>
<td>73</td>
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<td>73</td>
<td>MM 23.4 months</td>
<td>Comorbidity</td>
<td>Median 79 yrs</td>
<td>Median 12 yrs</td>
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<td>1-yr survival 65%</td>
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<td>Range (4-31)</td>
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<td>Ellam 2009</td>
<td>69</td>
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<td>69</td>
<td>MM 21 months</td>
<td>Serum albumin ≤3.5 g/dL</td>
<td>Median 80</td>
<td>&lt;15 MDRD</td>
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<td>Late referral</td>
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<td>Stage 5</td>
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*MM indicates active medical management without dialysis. Yrs indicates years. GFR indicates estimated glomerular filtration rate in milliliters per minute. RRT indicates renal replacement therapy. KPS indicates Karnofsky Performance Status score. CG indicates Cockcroft-Gault estimate. BMI indicates body mass index. MDRD indicates Modified Diet in Renal Disease study estimate. In the Smith 2003 study, survival of 10 patients who chose dialysis over medical management was not statistically significantly better than that of the 26 patients who chose medical management.
What Are the Alternatives to In-Center Hemodialysis?

• RRT comes in various forms
  in-center hemodialysis
  home hemodialysis
  PD
  kidney transplantation.
Home dialysis or PD

• require fewer visits to the dialysis center
• more flexibility over schedule
  less often
  shorter treatment times
• no survival data
• added health care burden to wife
  may not be an option
Renal transplant

• Not an option due to CVD
• Often not an option in frail elderly
Conservative approach

- active medical management without RRT
- option patients often not fully educated about before dialysis initiation\(^9\)
- may lead to comparable survival in select elderly patient populations
  - older
  - comorbidities
  - poor baseline functional status\(^6,8\)
  - poor nutritional status\(^10,12\)
- most studies conducted in the U.K.
  - selection process for dialysis may be different
  - multidisciplinary conservative care pathways better developed
Raises the question...
How to deliver “maximal” conservative management to ESRD patients who decline or discontinue dialysis?

- full integration of palliative care
- palliative medicine-trained nephrologists
- emphasis on QOL
  
  only 20% of the ESRD population uses hospice in the final month of life
0.6.1.4 – Coverage Under the Hospice Benefit

If the patient’s terminal condition is not related to ESRD, the patient may receive covered services under both the ESRD benefit and the hospice benefit. A patient does not need to stop dialysis treatment to receive care under the hospice benefit. Consequently, hospice agencies can provide hospice services to patients who wish to continue dialysis treatment.
What Will Mr. H.’s Life Be Like With and Without Dialysis?

• How Will His Time Be Spent If He Elects to Proceed With In-Center Dialysis?
• What Will Happen to Mr. H.’s Functional Status With and Without Dialysis?
• What Symptoms Might Mr. H. Expect With and Without Dialysis?
How Will His Time Be Spent If He Elects to Proceed With In-Center Dialysis?

• prospective observational study U.K. 5
• 202 patients older than 70 years
• patients on hemodialysis compared with patients on “maximum conservative management”
• Found hospital days defined as hospital inpatient days plus outpatient dialysis days
• hemodialysis group lived longer (median survival 37.8 months vs 13.9 months for MCM patients)
• But spent 47.5% of their days after initiation of dialysis in the hospital or receiving dialysis
• MCM patients only spent 4.3% of their days in the hospital
• hemodialysis patients had 4x greater likelihood of dying in the hospital than at home or in an inpatient hospice unit.
What Will Happen to Mr. H.’s Functional Status With and Without Dialysis?

• significant functional decline in frail octogenarians

• before dialysis initiation

  76 patients independent, 15 in assisted living, and 6 in a nursing home

• at one year

  28 independent, 24 assisted living, 12 NH and 33 died

• at two years the trend continued
SNF’s

• 3700 elderly long-term SNF residents with multiple comorbidities (mean age 73 years)\textsuperscript{17}

• data from the U.S. Renal Data System and the Minimum Data Set collected around dialysis initiation
  
  \hspace{1cm} at 12 months > 80% had died
  
  \hspace{1cm} very few maintained functional status
• study from the U.K.
• elderly patients with Stage V CKD
• Karnofsky Performance Status score of between 60 and 70
• treated with conservative management
• relatively preserved functional status until the last month of life
What Symptoms Might Mr. H. Expect With and Without Dialysis?

- study of Stage V CKD patients
  - fatigue - 76%
  - pruritus - 74%
  - drowsiness - 65%
  - dyspnea - 61%
  - pain - 53%
  - constipation - 35%
  - nausea - 26%
Systematic Review

- symptom prevalence in ESRD patients
- predialysis Stage V CKD patients vs patients with ESRD who were dialyzed
  - similar ratings of fatigue and pain (prevalence of 71% and 55%, respectively)
  - higher ratings of constipation and nausea (53% and 33%)
  - lower ratings of pruritis and dyspnea (55% and 35%)
• no studies directly comparing the effectiveness of focused symptom management in patients pursuing conservative management vs. dialysis
Conclusions

• In the elderly >80 with ESRD and dialysis, prognosis is poor with median survival generally < 16 months

• In the elderly with comorbid conditions, poor functional status, extreme advanced age or poor nutritional status dialysis may not prolong survival

• In older patients who choose dialysis, they will spend considerable more time away from home at an in-home center or the hospital than with MCM
• Functional status may deteriorate significantly in elderly patient with dialysis
• Functional status in elderly patients with ESRD who choose MCM may have more preservation of functional status
• Patients with ESRD are very symptomatic. Initiation of dialysis will probably improve pruritis but may not improve most other symptoms, including pain and fatigue
• maximally align treatment options with what matters most
• over time engage in ongoing conversations about treatment decisions in the context of goals, values, and changing circumstances
Evidence-based
10 adult recommendations
9 pediatric recommendations
Rationales and strategies for implementation for each
Tool kit of validated instruments

Available from RPA online store
www.renalmd.org
10 GUIDELINE STATEMENTS: 6 TOPICS

#1: Establishing a shared decision-making relationship

#2, #3: Informing patients

#4: Facilitating advance care planning

#5, #6: Making decisions about initiating and discontinuing dialysis

#7, #8: Resolving conflicts about which dialysis decisions to make

#9, #10: Providing effective palliative care
Pain and ESRD

- A common and severe symptom
- Impairs quality of life
- **Undertreated in 75% of ESRD patients** *
- Lack of knowledge in nephrology community

What’s New in the Guideline

• The poor prognosis of some elderly stage 4 & stage 5 chronic kidney disease patients, many of whom are likely to die prior to initiation of dialysis or for whom dialysis may not provide a survival advantage over medical management without dialysis.

• An online calculator to estimate prognosis in ESRD patients [http://touchcalc.com/calculators/sq](http://touchcalc.com/calculators/sq)

• The identification of distinctly different treatment goals for ESRD patients based on their overall condition and preferences.

• The frequent prevalence of cognitive impairment in dialysis patients.
Providing Effective Palliative Care

- **Recommendation No. 9**
- To improve patient-centered outcomes, offer palliative care services and interventions to all AKI, CKD, and ESRD patients who suffer from burdens of their disease.

- **Recommendation No. 10**
- Use a systematic approach to communicate about diagnosis, prognosis, treatment options, and goals of care.
Relationship between Palliative Care and EOLC
Informed Consent for Elderly CKD Patients SHOULD INCLUDE:

- Patients with this level of illness more likely to die than live long enough to progress to ESRD.\(^1\)
- The majority of patients in their condition die or succumb to significant functional decline during their first year on dialysis.\(^2\)


- Surgery and complications for vascular access or peritoneal access placement
- Adverse physical symptoms on dialysis -- dizziness, fatigue, and cramping, and a feeling of "unwellness" after dialysis.
- Travel time and expense to and from dialysis
- Long hours spent on dialysis → reduction in the time available for physical activity.

- Invasive and costly tests, procedures, and hospitalizations.

Dialysis may not confer a survival advantage

Life on dialysis entails burdens likely to detract from their quality of life

Unnecessary "medicalization of death"
Reason to Consider Age > 75

“Most older members of this cohort [209,622 VA patients with stage 3 to 5 CKD], especially those ≥ 75 years, were far more likely to die than develop ESRD, even when their eGFR was severely reduced (15 to 29 ml/min per 1.73 m²).”

Recommendation No. 3: Informing patients
All patients with AKI, stage 5 CKD or ESRD should receive patient-specific estimates of prognosis.

2 or more → Poor prognosis\(^1,2,3\)

1. \(\geq\) 75 years

2. High comorbidity scores ("No" to "Surprise" Question)
   A. (e.g., modified Charlson Comorbidity score \(\geq\) 8)

3. Marked functional impairment
   A. (e.g., Karnofsky performance status score < 40)

4. Severe chronic malnutrition
   A. (e.g., serum albumin level < 2.5 g/dL using the bromcresol green method).

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Patients in this population should be informed:
1. Dialysis may not confer a survival advantage or improve functional status over medical management without dialysis
2. Dialysis entails significant burdens which may detract from their quality of life.
Recommendation No. 5 If appropriate, forgo (withhold initiation or withdraw ongoing) dialysis for patients with AKI, CKD, or ESRD in certain, well-defined situations:

**APPROPRIATE TO SAY “NO”**

**PATIENT SAYS “NO” DIRECTLY**
- Patients with decision-making capacity, who being fully informed and making voluntary choices, refuse dialysis or request that dialysis be discontinued

**PATIENT SAYS “NO” INDIRECTLY**
- Patients who no longer possess decision-making capacity who have previously indicated refusal of dialysis in an oral or written advance directive

**PROXY SAYS “NO”**
- Patients who no longer possess decision-making capacity and whose properly appointed legal agents/surrogates refuse dialysis or request that it be discontinued

**PROVIDERS SAY “NO”**
- Patients with irreversible, profound neurological impairment such that they lack signs of thought, sensation, purposeful behavior, and awareness of self and environment.

References


15. Wong SP, Kreuter W, O’Hare AM. Treatment intensity at the end of life in older adults receiving long-term dialysis. Arch Intern Med 2012;172: 661e663; discussion 663e664.


