

Treating progressive kidney disease without maintenance dialysis

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Background

Burden of dialysis

- Maintenance dialysis is a very demanding and time-consuming form of therapy.
- Dialysis is associated with loss of independence and has limited impact of symptom burden.
- Dialysis is associated highly intensive patterns of care, especially at the end-of-life care.

Intensity of end-of-life care

Table. Intensity of Care During the Final Month of Life

Intensity of Care	Medicare Beneficiaries		
	Dialysis (Present Study)	Cancer ⁷	Heart Failure ^{8,9}
Hospitalization, %	76.0	61.3	64.2
Days hospitalized, mean	9.8	5.1	NA
Intensive care unit admission, %	48.9	24.0	19.0
Days in an intensive care unit, mean	3.5	1.3	NA
Any intensive procedure, %	29.0	9.0	NA
Hospice use, %	20.0	55.0	39.1
Death in a hospital, %	44.8	29.0	35.2

Intensive procedures: intubation, CPR, feeding tube

Saying 'NO' to dialysis

- In other developed countries, survival and quality of life may be similar between older patients with significant comorbidity treated with dialysis and those with conservative care.
- Treatment practices for ESRD vary substantially between the US and other countries.
- The findings from international studies may not be relevant to the US context.

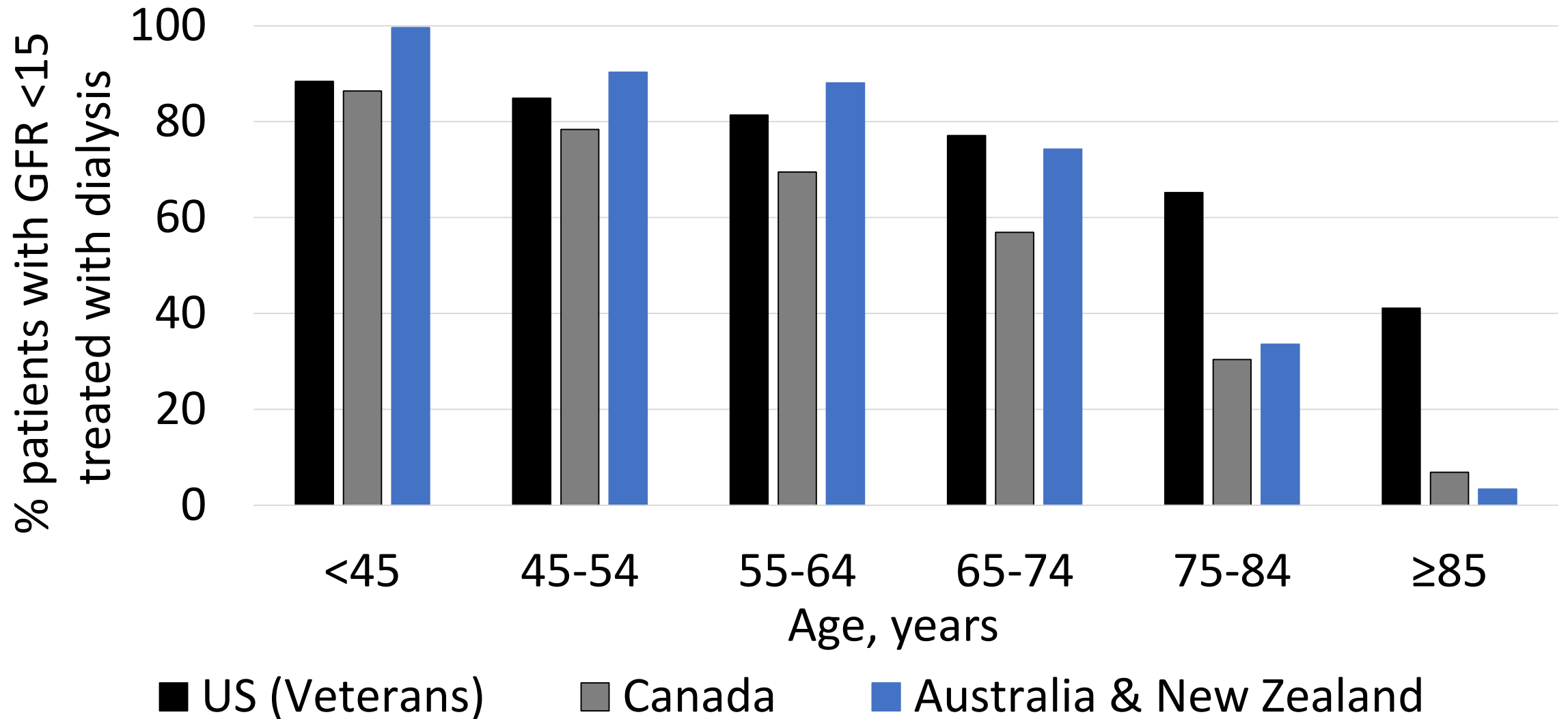
Median survival after reaching eGFR <15 for patients aged >75 years with significant comorbidity

Study (name, year)	Country	dialysis, months	conservative care, months	P-value
Murtagh, 2007	United Kingdom	23	23	0.98
Chandna, 2011	United Kingdom	26	20	0.83
Hussain, 2013	United Kingdom	29	24	0.3
Shum, 2014	Hong Kong	36	24	0.08
Verberne, 2016	Netherlands	36	30	0.59

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International variation of ESRD care



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Study

Aim

- To compare end-of-life care of patients with advanced CKD who were treated and not treated with maintenance dialysis.

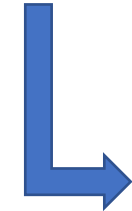
Design and methods



14,071 Veterans with eGFR <15 btw 2000-2009 and died by 2011.



- ✓ 12,756 received dialysis.
- ✓ 503 was preparing for but died before starting dialysis.
- ✓ 812 decision against dialysis.



Measures of end-of-life care

- Hospitalization during final month of life
- Intensive procedures during final month of life
- In-hospital death
- Palliative care consultation
- Hospice enrollment



Results

Patient characteristics

Characteristics at eGFR<15	Received dialysis	Preparing for dialysis	Decision against dialysis
Mean age (SD)	65.4 (10.5)	68.4 (10.8)	75.0 (10.3)
White race	62.3	58.3	66.8
Comorbidities			
Congestive heart failure	33.5	37.4	42.4
Cancer	18.7	28.4	32.1
Chronic obstructive pulm disease	18.2	26.2	28.8
Dementia	1.8	3.6	9.0
Stroke	8.6	10.1	13.1
Cirrhosis	1.3	3.0	2.1
No renal clinic in year prior	23.8	34.6	46.8
Median time from eGFR< 15 to death, months	46.3	10.7	6.3

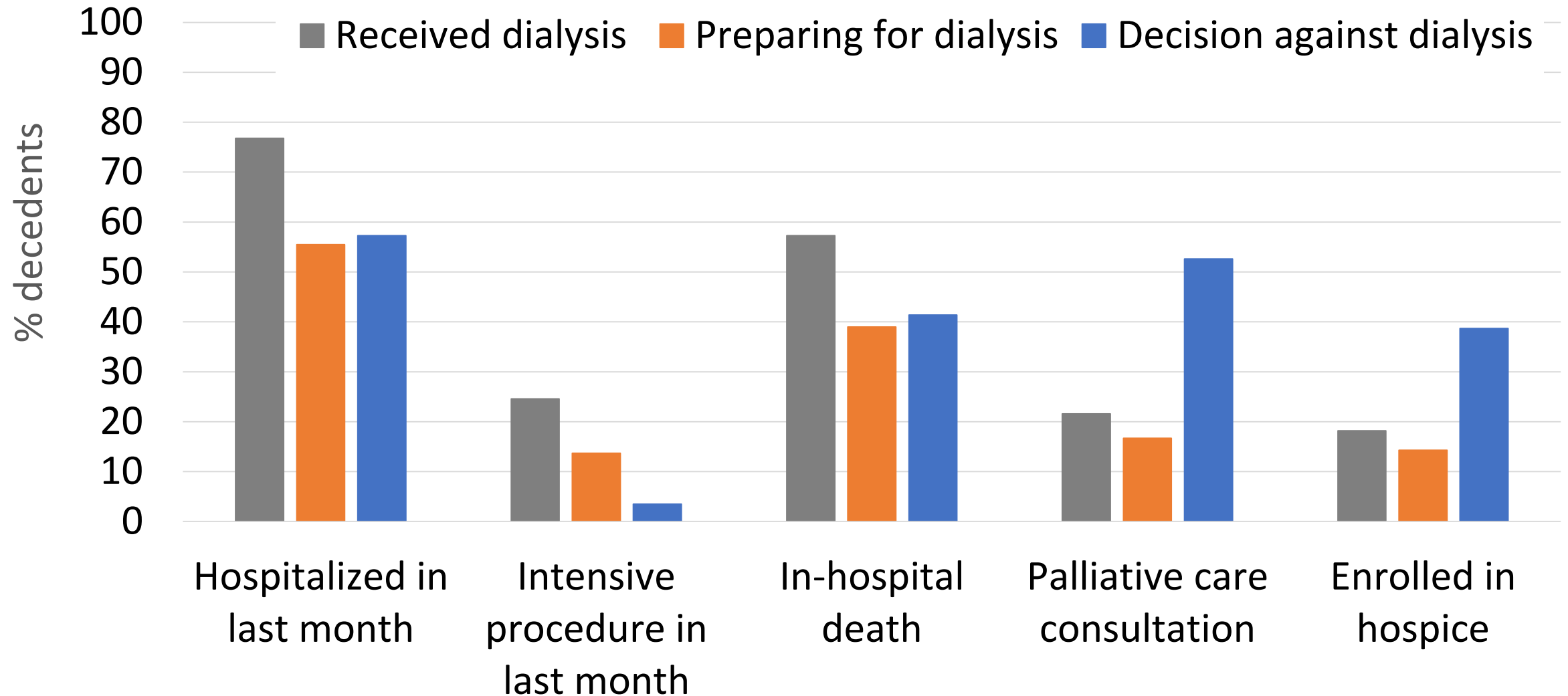
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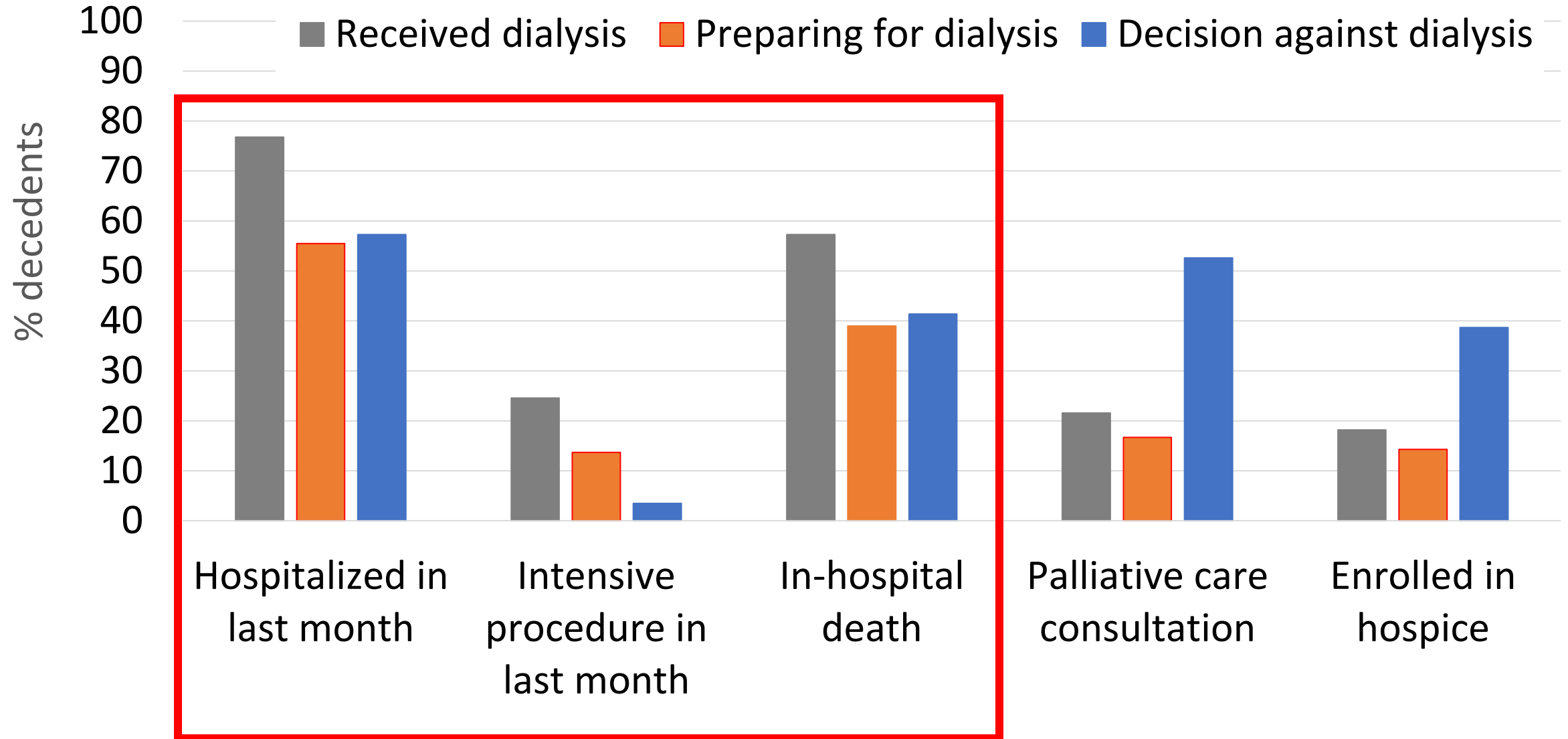
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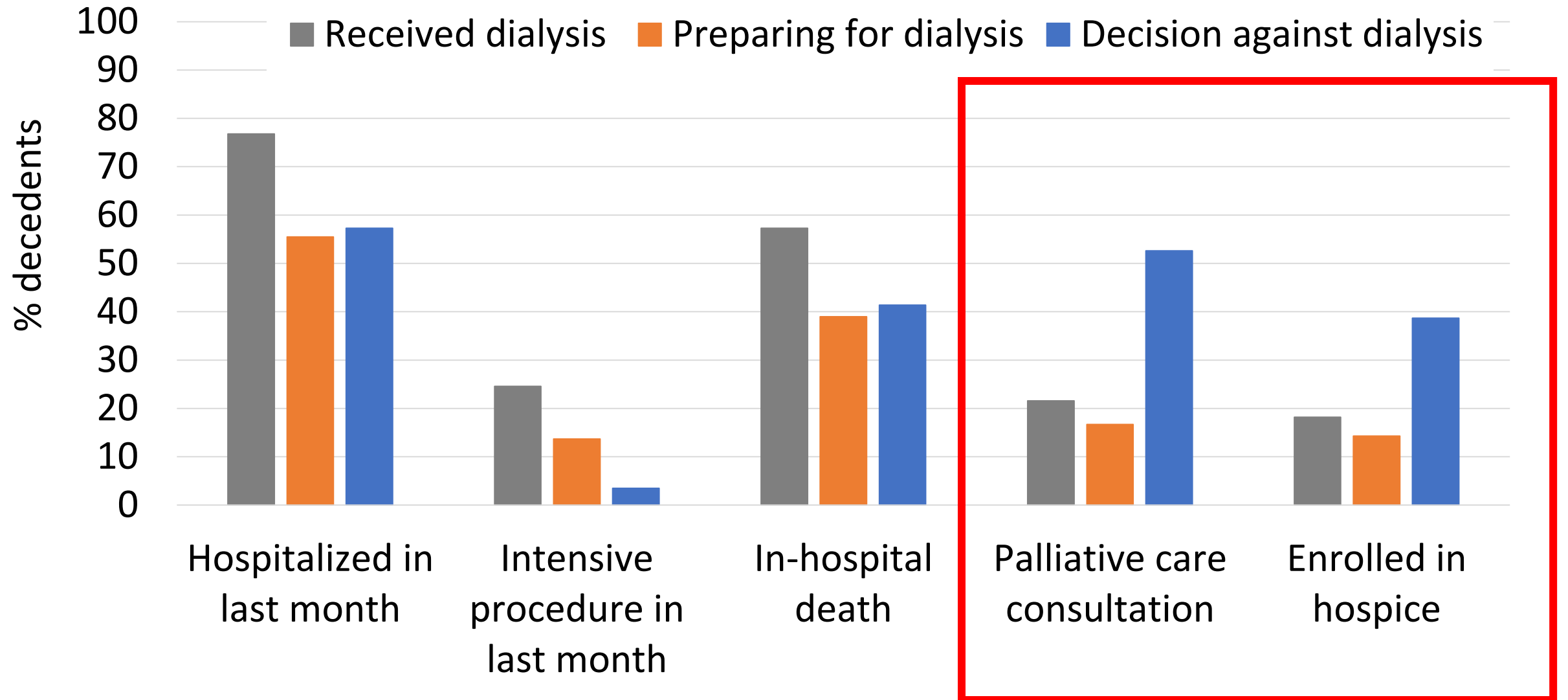
End-of-life care intensity



End-of-life care intensity



End-of-life care intensity



End-of-life transitions

Duration and timing of end-of-life care, median days (IQR)			
	Received dialysis	Preparing for dialysis	Decision against dialysis
Inpatient days during final month of life	14 (6-28)	8 (3-21)	10 (4-24)
Timing of 1 st palliative care encounter relative to death	7 (3-29)	8 (3-28)	27 (5-81)
Timing of hospice enrollment relative to death	6 (2-32)	8 (2-28)	14 (1-68)

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Discussion

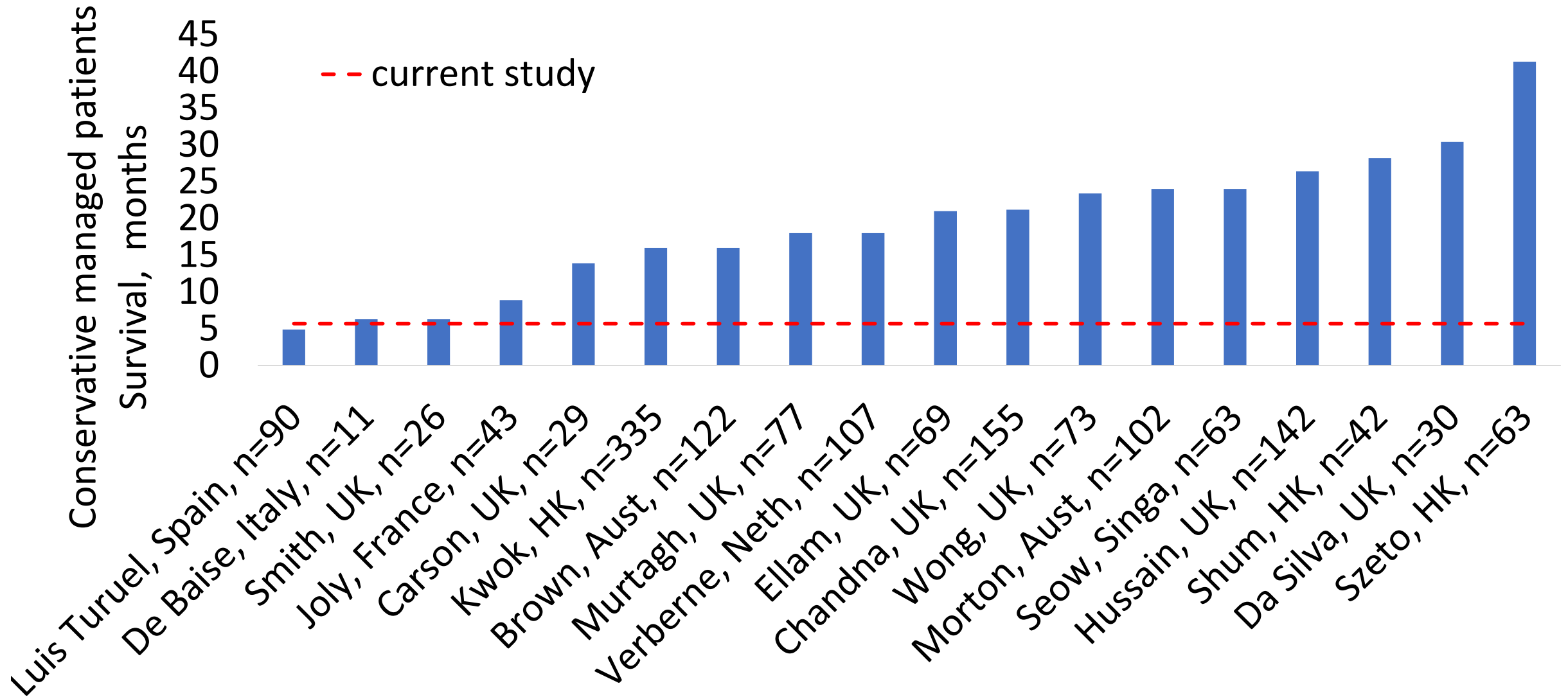
Summary of Findings

- This is first study to describe patterns of end-of-life care of patients not treated with dialysis.
- Patients treated with dialysis received more intensive end-of-life care than those not treated with dialysis.
- Palliative care consultation and hospice referral were only more common among patients in whom there was a decision against dialysis.
- Healthcare intensity was still quite high for patients who did not pursue dialysis.

Low access to palliative care and hospice

- Hospice use was as low among Veterans (18.2%) who received dialysis as it is among Medicare beneficiaries on dialysis (17.9%).
- Palliative care consultation (21.6%) was also lower in this group than for other Veterans with cancer (34.5%)
- Regulatory and reimbursement restrictions are unlikely to explain low uptake of hospice care and palliative care consultation among patients with advanced CKD.

Late decisions and transitions



Take home points

- Unless there had been a concrete decision not to pursue dialysis prior to death, healthcare intensity near the end of life was high and utilization of palliative care and hospice services limited.
- Decisions not to pursue dialysis and transition to palliative care and hospice services occurred late in the illness trajectory and in a less proactive fashion for patients with advanced CKD.
- Greater efforts are needed to better integrate palliative care and hospice into models of CKD care.

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Thank you!