Renal Palliative Care – An Overview

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South Australian Palliative Care Association – Annual Conference, Adelaide, May 2015.

A 53 year old woman

- Type 2 Diabetes Mellitus
- Hypertension
- OA – mild
- ESKD – Diabetic Nephropathy
- HD 3/week for 5 years

- Shuffled in to the clinic room
- Head down
- No eye contact

“My legs move all through the night” – Severe Restless Legs Syndrome - 2 years

“I itch all the time… often it becomes ferocious”

Severe uraemic pruritus – 3 years

“My feet and calves burn and get pins and needles – it is awful”

Severe diabetic peripheral neuropathy – 18 months

And sleep ?

“I don’t sleep… I doze in 5 minute lots...

“I sit on a chair and put my elbows on my knees to hold them still…

and I pray to die.”

Overview

What role does Palliative Care have in Nephrology ?

Withholding and withdrawing from dialysis

What exactly is the conservative, non-dialytic management of ESKD ?

Symptom management

Care of the dying patient with ESKD

Creating and nurturing a Renal Supportive Care service

What possible role does Palliative Care play in End Stage Kidney Disease ?

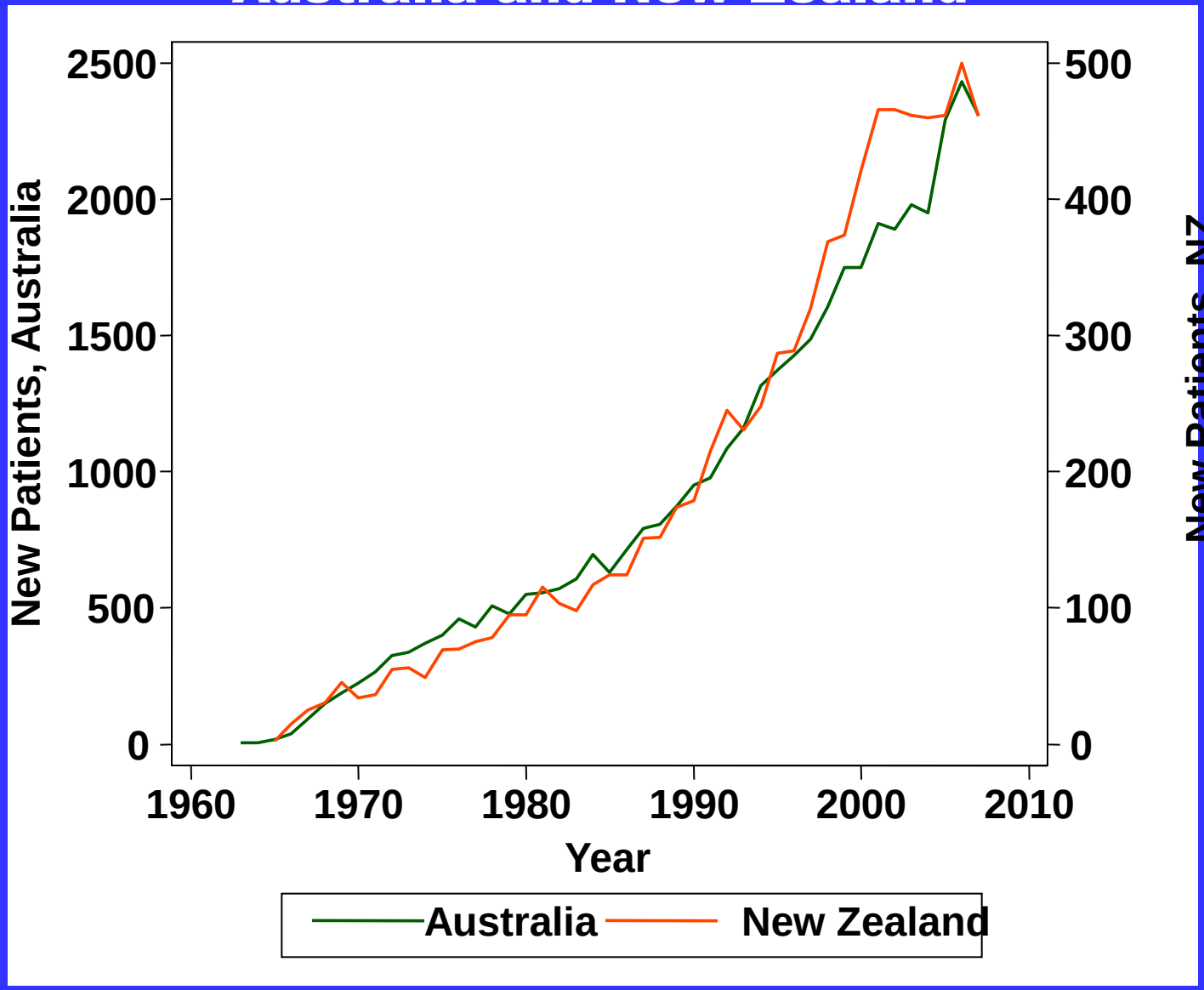
1. Epidemiology

DIALYSIS PATIENTS

In developed nations the characteristics of patients on dialysis have changed over the years.

Essentially more elderly patients with co-morbidities.

Number Starting Renal Replacement Therapy
Dialysis or Transplantation
Australia and New Zealand



In Australia the mean age of patients commencing RRT is 60 years.

ANZDATA Annual Report 2014.

The age cohort that has the greatest prevalence on dialysis

is the 65-84 year old group.

ANZDATA Annual Report 2014.

Does everyone who has ESKD commence dialysis ?

In Australia, for every one patient with ESKD receiving Renal Replacement Therapy (RRT)

there is another who does not receive RRT

Australian Institute of Health and Welfare Research, 2011

2. Mortality

ESRD patients

Overall patients with ESKD with or without RRT have a reduced life expectancy compared to age-matched controls.

DIALYSIS

For patients on dialysis 13.7 % die each year (ANZDATA 2014 Report)

For those aged 75 years and older that figure is 25 %

3. Symptomatology

"Patients with CKD, particularly those with ESRD are among the most symptomatic of any chronic disease group."

Murtagh F, Weisbord S. Symptoms in renal disease. In Chambers EJ et al (eds) *Supportive Care for the Renal Patient* 2010, 2nd ed, OUP.

What are the common symptoms associated with ESKD ?

The Prevalence of Symptoms in End-stage Renal Disease : A systematic Review

Murtagh FE et al. *Advances in Chronic Kidney Disease*
Vol 14, No 1 (January) 2007; pp 82-99

A Cross-sectional Survey of Symptom Prevalence in Stage 5 CKD managed without Dialysis

Murtagh FEM et al. J Pall Med (2007) 10;6:1266-1276

SYMPTOM PREVALENCE

	Dialysis	Conservative
FATIGUE/TIREDNESS	71%	75%
PRURITUS	55%	74%
CONSTIPATION	53%	
ANOREXIA	49%	47%
PAIN	47%	53%
SLEEP DISTURBANCE	44%	42%

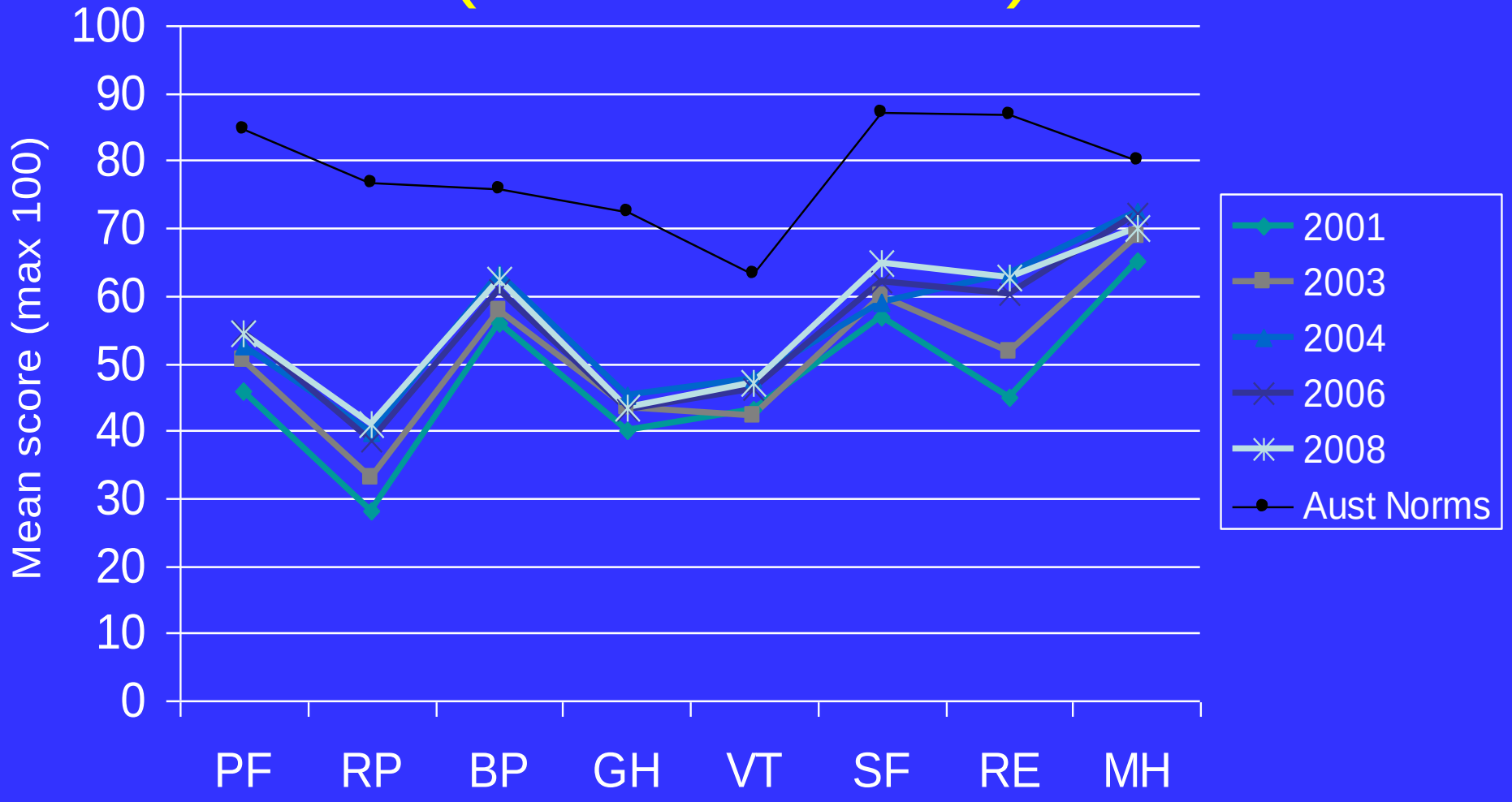
SYMPTOM PREVALENCE

	Dialysis	Conservative
ANXIETY	38 %	
DYSPNEA	35 %	61 %
NAUSEA	33 %	
RESTLESS LEGS	30 %	48 %
DEPRESSION	27 %	

- Symptoms are prevalent
- Symptoms are multiple
- Symptoms are burdensome

4. Quality of life

QOL - St George dialysis (SF-36 Scores)



5. The “quality” of dying

Realistically, given issues of manpower,

it may not be possible for a Palliative Care health professional to be present in every

Renal Unit

What are the core competencies in a “Palliative approach” to patients with ESKD for medical practitioners ?

4 Pillars of a Palliative approach

- Communication
- Symptom management
- Psychosocial support
- Care of the dying patient

Communication

Once ESRD is diagnosed it is important examine the various options

RRT

Conservative

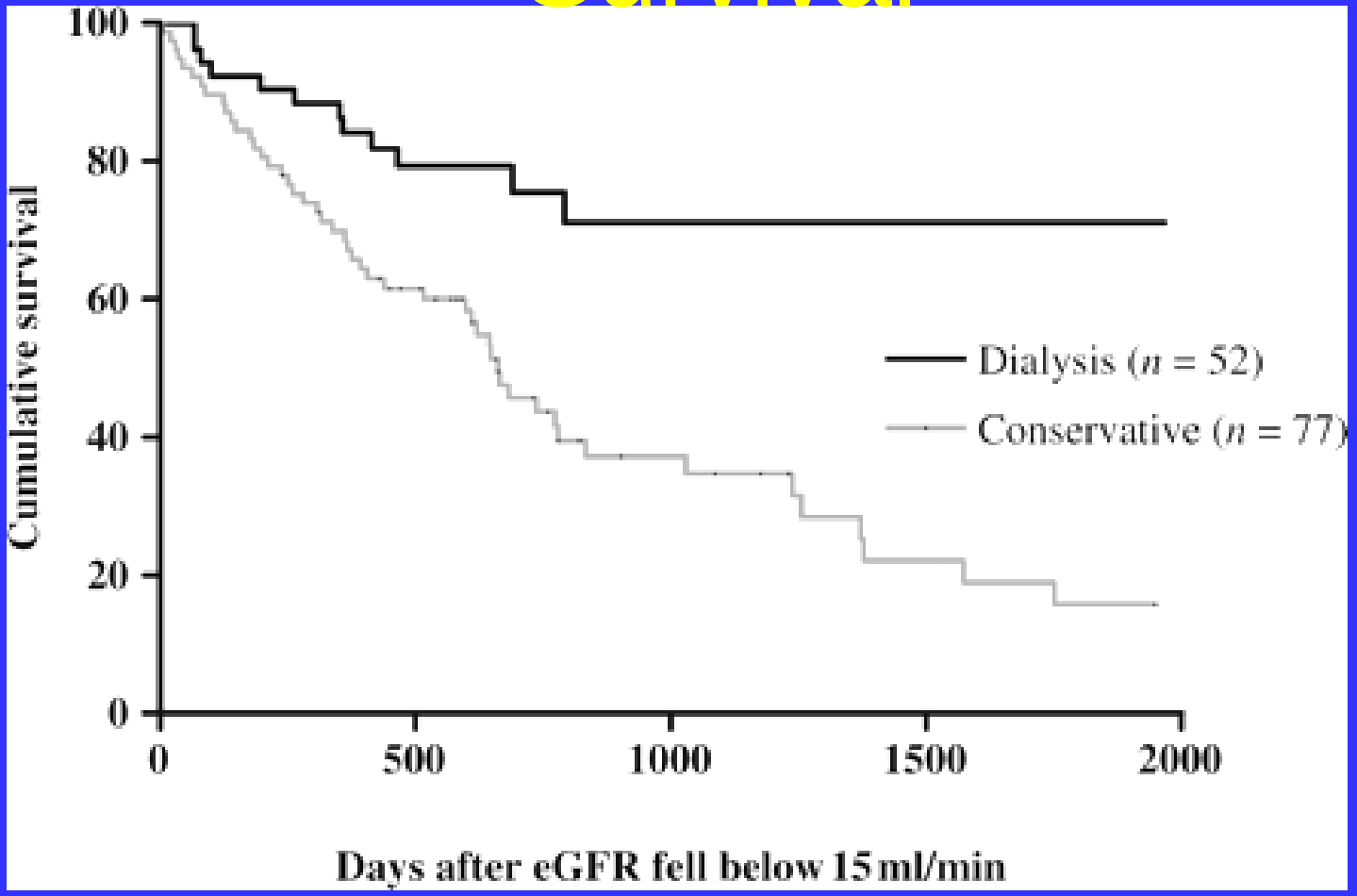
Decision making around dialysis

Survival

Dialysis or not ? A comparative study of survival of patients over 75 years with CKD Stage 5.

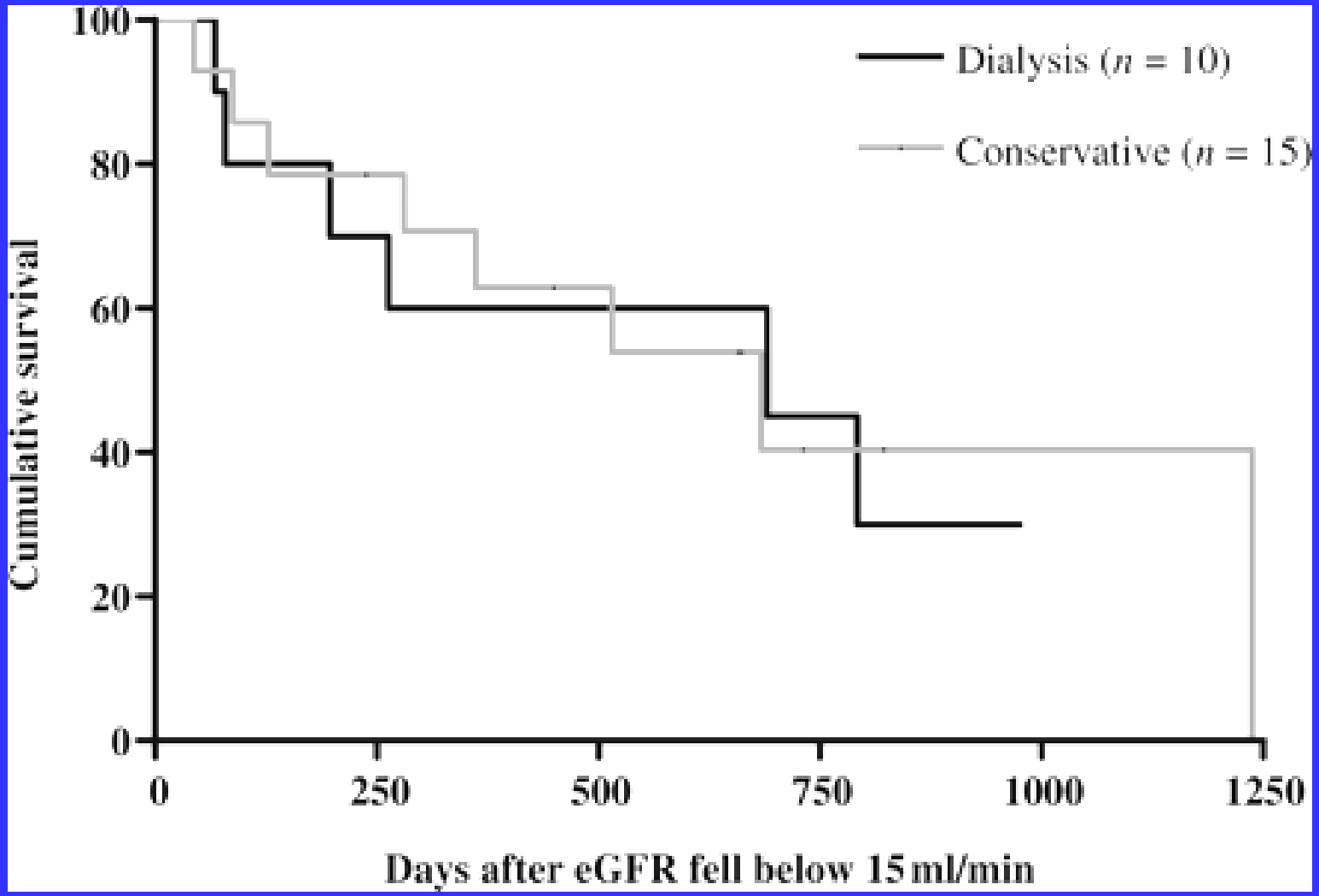
Murtagh FEM et al. *Neprol Dial Transplant* 2007;22:1955-1962

Survival



Murtagh et al. NDT. 2007;22:1955-62

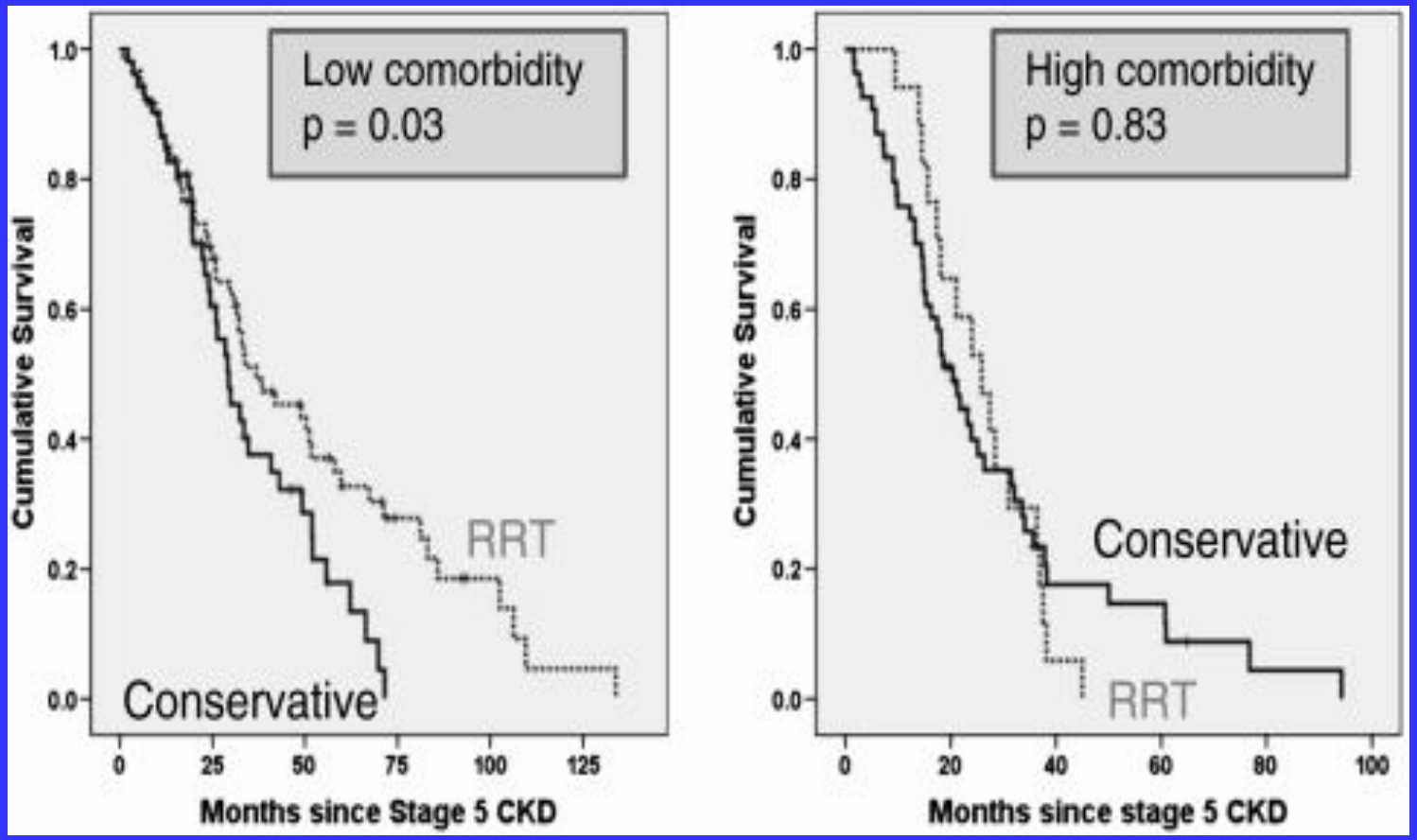
Survival benefit lost if Co-morbidities include IHD



Murtagh et al. NDT. 2007;22:1955-62

RRT v Conservative

Chandra et al NDT Nov 2010



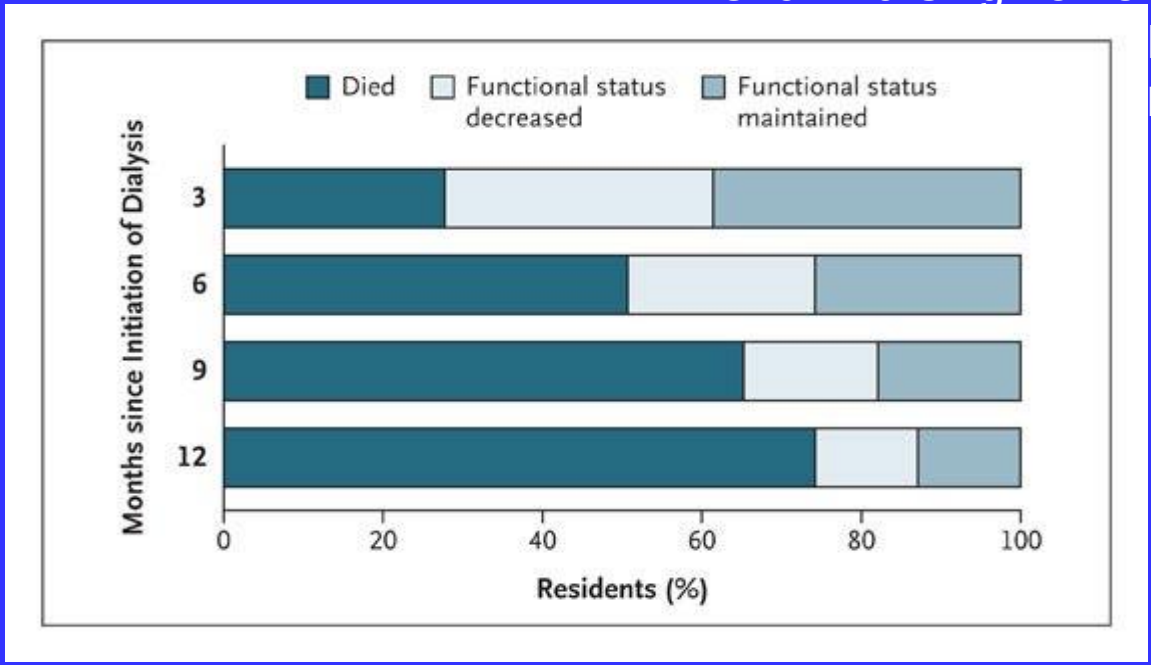
Dialysis in Frail Elders — A Role for Palliative Care

Robert M. Arnold, M.D., and Mark L. Zeidel, M.D.

The NEW ENGLAND JOURNAL of MEDICINE

Volume 361:1597-1598 October 15, 2009

Change in Functional Status after Initiation of Dialysis



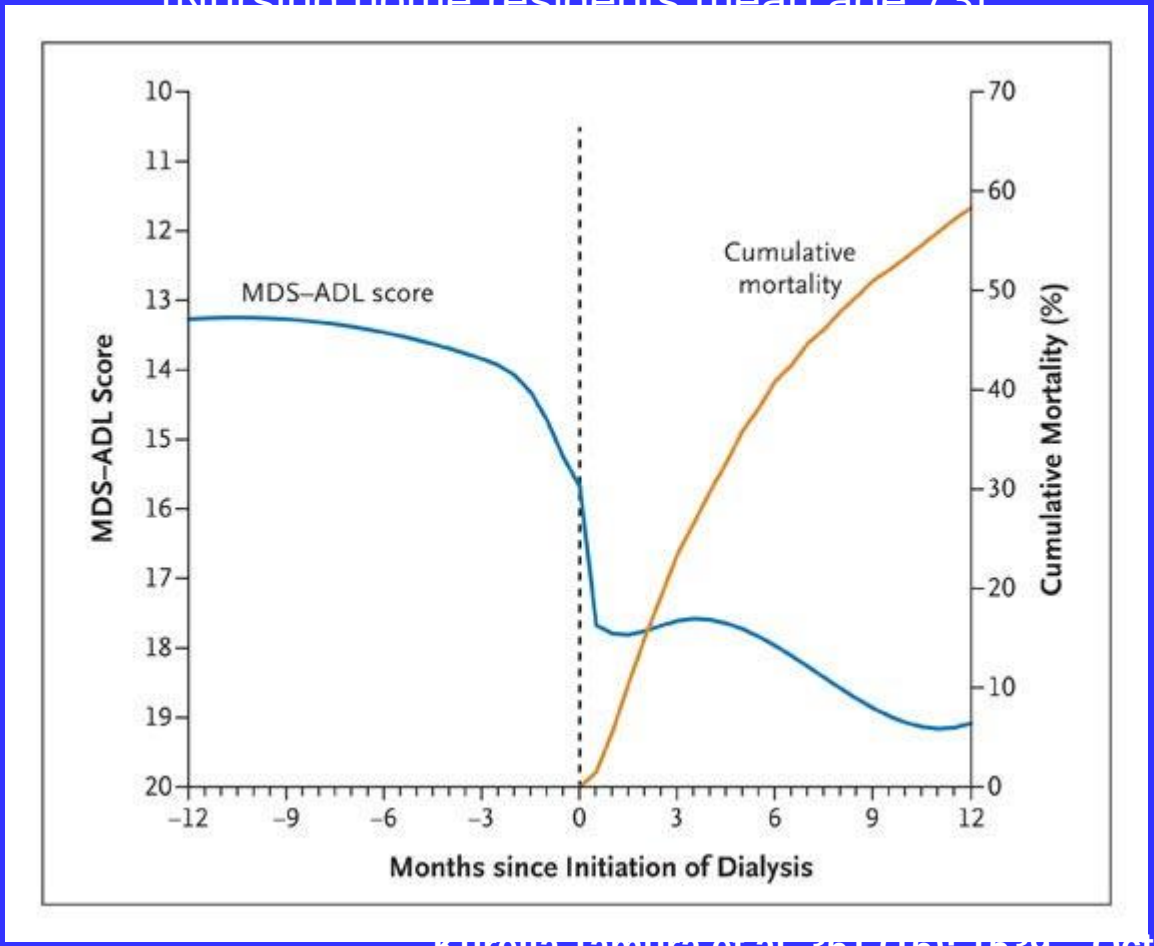
3702 Nursing home residents mean age 73
Mean eGFR 10
Female 60%
Diabetes 68%
CHF 66%
CHD 44%
Cerebrovascular dis. 39%
Depression 35%
Dementia 22%

Kurella Tamura et al. 361 (16): 1539, October 15, 2009

The NEW ENGLAND JOURNAL of MEDICINE

Smoothed Trajectory of Functional Status before and after the Initiation of Dialysis and Cumulative Mortality Rate

[Nursing home residents mean age 73]



Kurella Tamura et al. 361 (16): 1539. October 15, 2009

The NEW ENGLAND JOURNAL of MEDICINE

Clinical Practice Guidelines on Shared Decision-Making in the Appropriate Initiation of and Withdrawal from Dialysis

Renal Physicians Association of the USA 2010.

Recommendation No. 6

It is reasonable to consider forgoing dialysis for … ESRD patients who have a very poor prognosis or for whom dialysis cannot be provided safely.

1. Those whose medical condition precludes the technical process of dialysis because the patient :

   (a) is unable to co-operate (eg. Advanced Dementia)

   (b) unstable medically (eg. Significant hypotension)

2. Another life-limiting illness – although this may be negotiated

3. Over 75 years
with 2 or more of the following statistically significant criteria predictive of very poor prognosis :

(a) Surprise question.
(b) High Co-morbidity Score
(c) Significantly impaired Functional status such as Karnofsky < 40,
(d) Severe chronic malnutrition (s. Albumin < 25.)

Conservative management of ESRD

This may be decided in consultation with a Nephrologist, or

The patient is not referred to a Nephrologist in the first place

What level of care occurs for this group ?

If this is being raised as an option :

What does a Conservative pathway mean ?

What is its content ?

Can we make predictions about their course ?

Challenge is

to ensure that this pathway of management is not seen as “second best” or inadequate

but is thorough, systematic and evidenced-based

Renal Medicine

Blood Pressure
Calcium/Phosphate
Anaemia
Fluid balance

Palliative approach

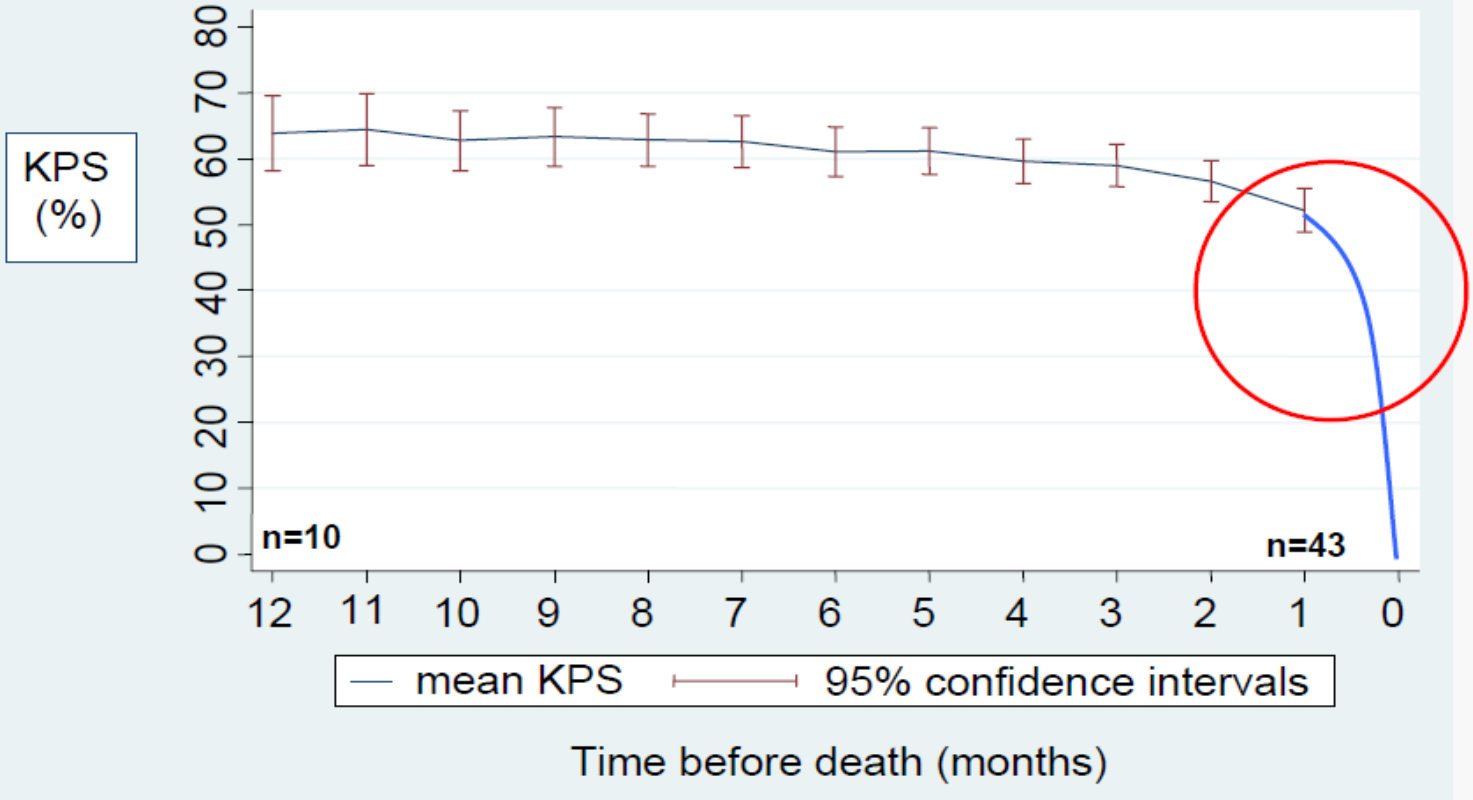
Symptom management
Psychosocial support
Care of the dying

There is a modest, but growing body of literature of research on this cohort of patients.

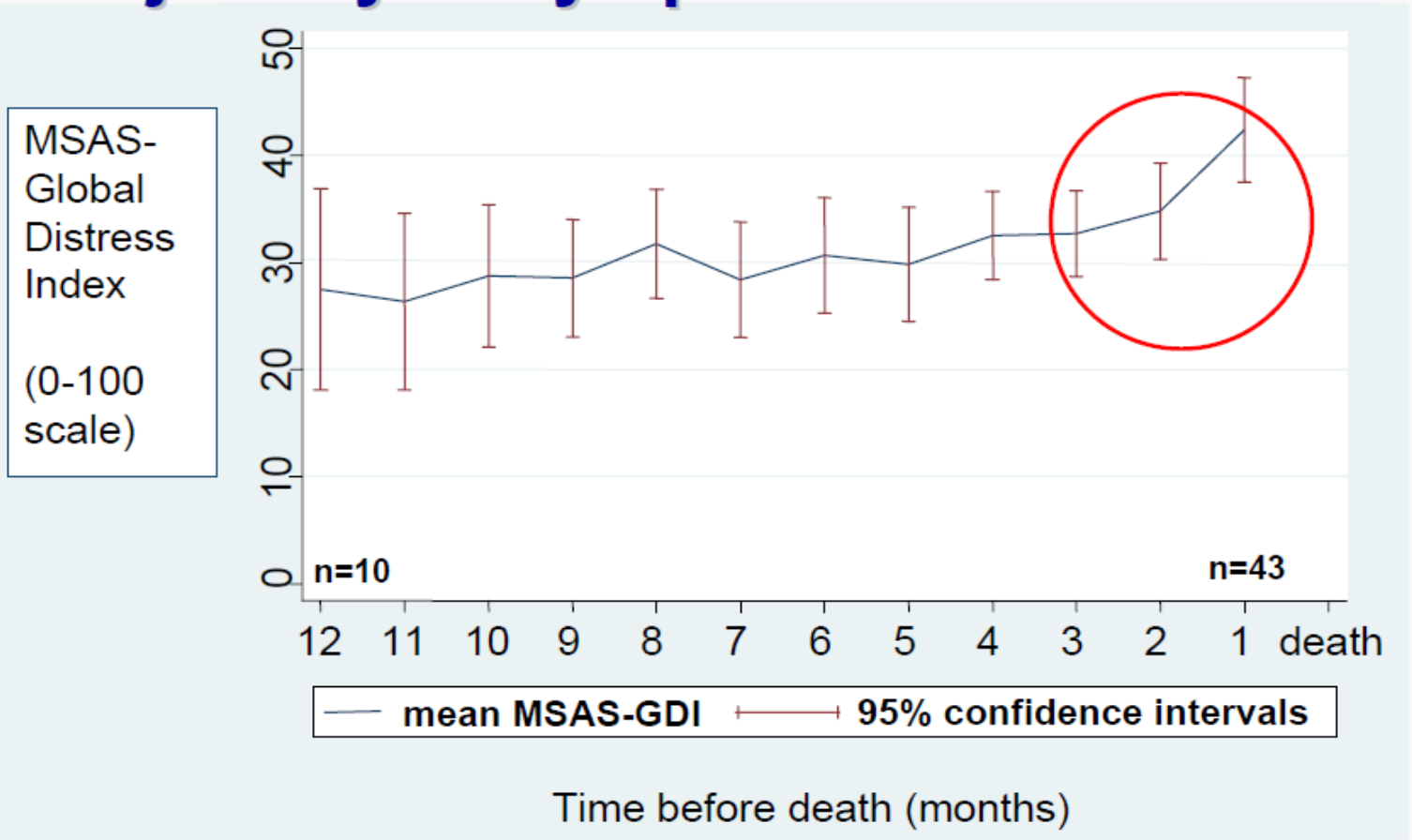
Longitudinal study of conservative stage 5 CKD

- Included patients with Stage 5 Chronic Kidney Disease with definite decision for conservative (non dialysis) management, and with capacity for consent
- 73 participants (response rate 62%)
- 49 (66%) died during follow-up
  - mean age 81 years, range 58-95 yrs
  - 24 (49%) men
  - median follow-up 8 months (range 1-23 months)
- Outcomes measured monthly until death or study end
  - Symptoms (MSAS-SF)
  - Palliative needs (POS)
  - Functional status (KPS)

Trajectory of functional status:



Trajectory of symptom distress:



Trajectory of palliative needs:



Symptom management

SYMPTOM PREVALENCE

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Symptom control is challenging

Symptoms interact and compound each other

Nocturnal :

U.Pruritus
RLS → Insomnia → Fatigue
Pain

Symptoms may derive from the co-morbidities

ESKD constrains the use of medication

Pharmacology in the context of CKD is complex

with the altered pharmacokinetics of most medications in renal impairment

Multiple gaps in knowledge

Recommendations in published data occasionally conflict on the specific doses of medications to be used.

Principles of symptom management

1. Think of the cause(s).

2. Be meticulous

3. Principle of non-abandonment

URAEMIC PRURITUS

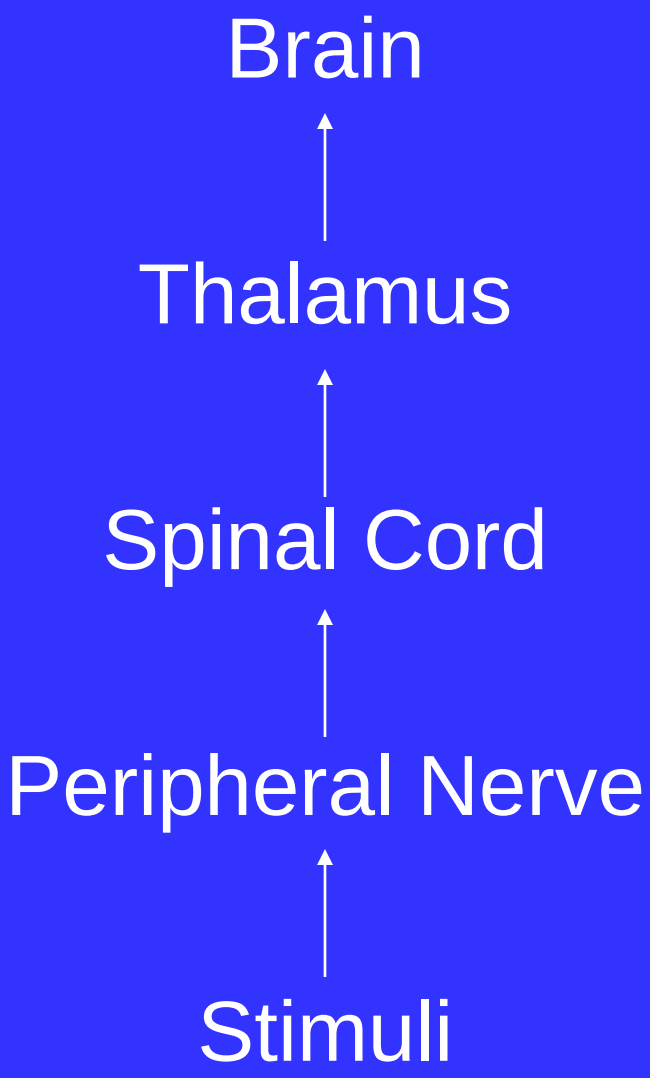
Associations

- Poor sleep quality
- Depression
- QOL
- Mortality

Pisoni RL, Wikstrom B et al. Neprol Dial Transplant 2006; 21: 3495-3505.

The pathogenesis of pruritus

Complex neural network within the dermis and nerve fibres enter the Epidermis as free nerve endings


Brain
Thalamus
Spinal Cord
Peripheral Nerve
Stimuli

C Fibres

5 - 10 % of the C fibres are itch sensitive

For many years the assumption was :

Histamine → C Fibres → Spinal Cord

Of the C Fibres that are itch-sensitive :

20 % are Histamine-sensitive

80 % are Histamine-insensitive

Myth 1

That all itch is histamine mediated

Myth 2

That the best first line medication for pruritus of whatever cause are Anti-Histamines

Pathogenesis of Uraemic Pruritus

Multiple theories, conflicting findings

"Despite this vast array of possible explanations, none consistently have been demonstrated to be the underlying cause of pruritus associated with CKD. Large epidemiological studies ultimately may facilitate our understanding of the elusive pathophysiological process of this distressing symptom."

Patel TS et al. *Am J Kidney* 2007; 50(1): 11-20.

Large number of therapies described

What therapies have the strongest foundation in evidence – based practice ?

- Oral medications
- Topical preparations
- UV Therapy

Gabapentin

There are 3 (three) Level 1 studies showing that Gabapentin has significant efficacy in treating uraemic pruritis

Gunal et al (2004)

Naini et al (2007)

Razeghi et al (2009)

On Dialysis

Gabapentin 100mg after each Dialysis and titrating to effect

On conservative management with eGFR < 15

Gabapentin 100mg every second night and titrating to effect

On conservative management with eGFR > 15

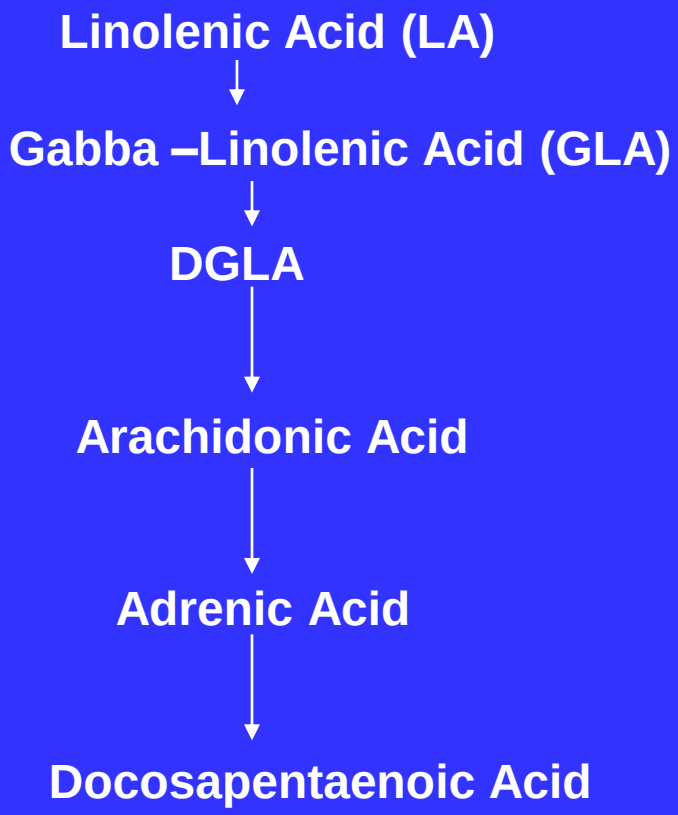
Gabapentin 100mg nocte
and titrating to effect

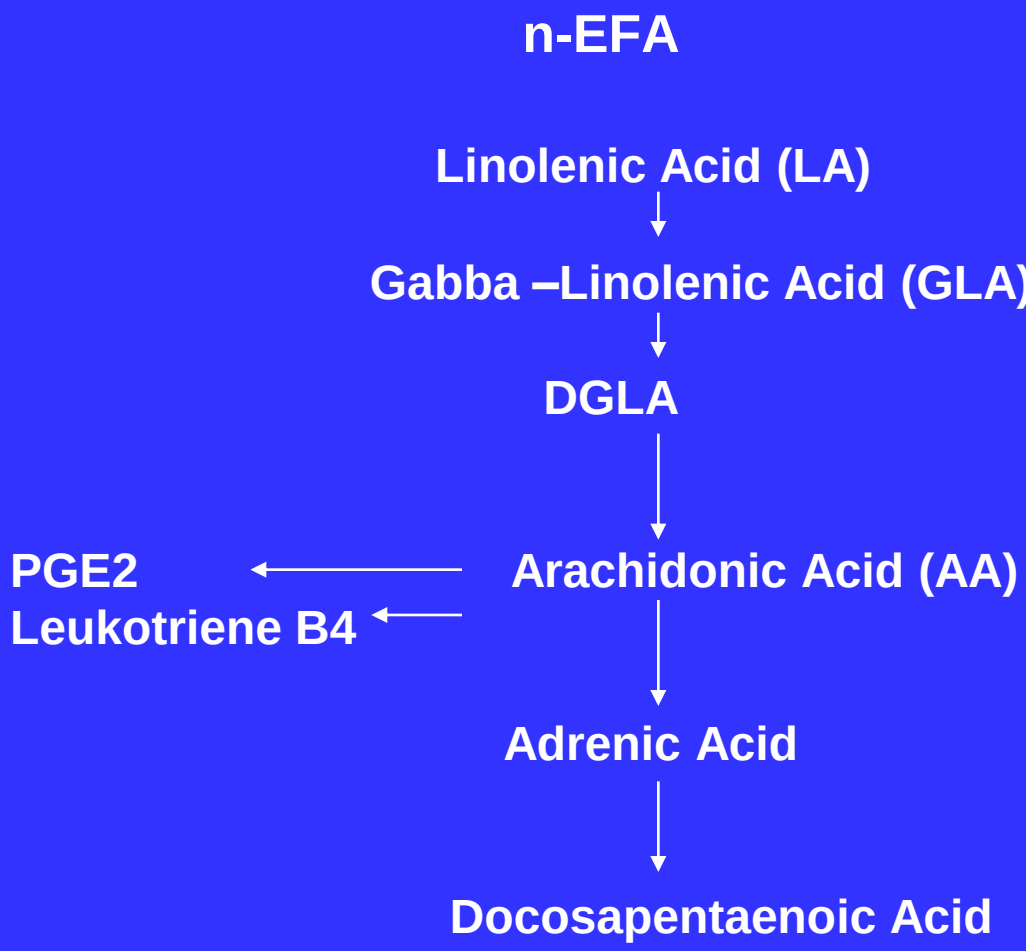
Evening Primrose Oil

Gabba Linolenic Acid (GLA)

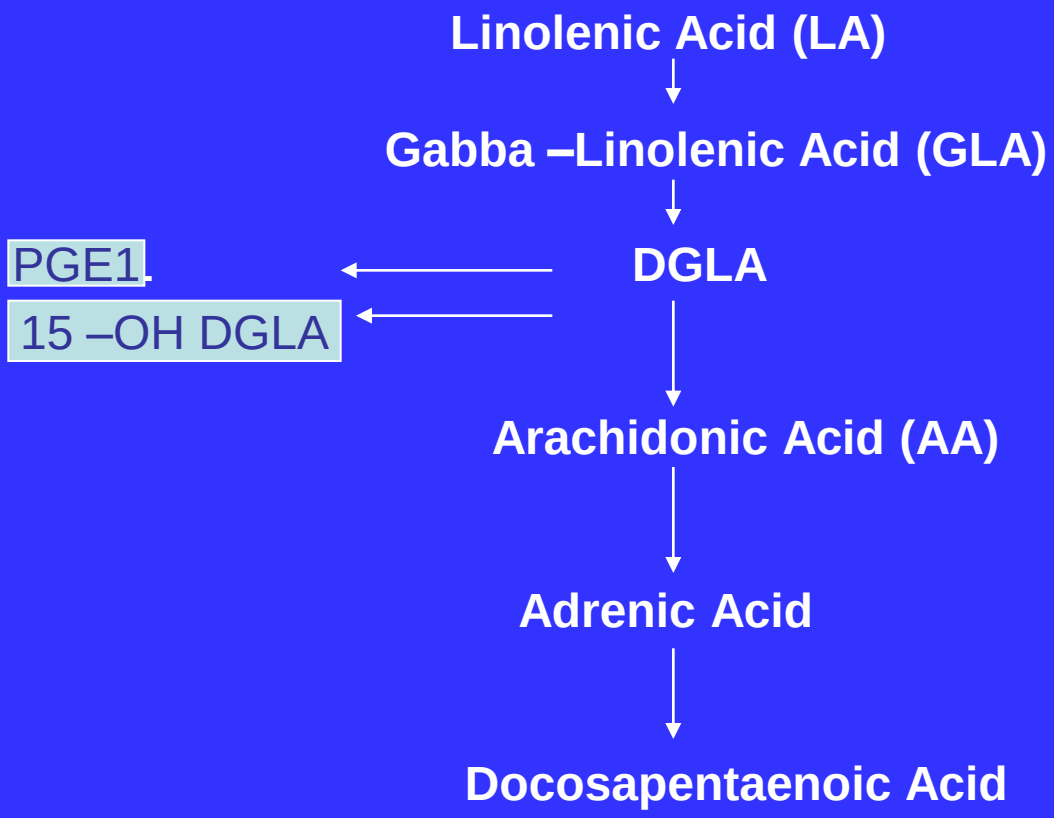
Essential Fatty Acids (EFA) in the epidermis

n- 6 EFA


Linolenic Acid (LA)
Gabba –Linolenic Acid (GLA)
DGLA
Arachidonic Acid
Adrenic Acid
Docosapentaenoic Acid


n-EFA
Linolenic Acid (LA)
Gabba –Linolenic Acid (GLA)
DGLA
PGE2
Leukotriene B4
Arachidonic Acid (AA)
Adrenic Acid
Docosapentaenoic Acid

n- 6 EFA


Linolenic Acid (LA)
Gabba –Linolenic Acid (GLA)
DGLA
PGE1
15 –OH DGLA
Arachidonic Acid (AA)
Adrenic Acid
Docosapentaenoic Acid

So supplementing the Gabba-Linolenic Acid (GLA) has an anti-inflammatory/ anti-itch effect

100mg bd

= Evening Primrose Oil
contains GLA
= 1-2 capsules bd

Thalidomide 100mg nocte

Silva SR. *Nephron* 1994; 67(3): 270-273

Other oral medications

- Anti-Histamines – evidence does not support use.
- Ondansetron – conflicting results. Not recommended.
- Cimetidine – not recommended
- Naltrexone – conflicting results. Not recommended.

Murtagh FEM, Weisbord D . Symptom management in Renal Failure. In : Chambers EJ et al (eds). *Supportive Care for the Renal Patient*. 2nd ed. 2010. OUP. p. 120

Topical preparations

Moisturisers

Capsaicin cream (0.025 %)

Side effect – transient “burning” feeling on the skin

UV-B Therapy

RESTLESS LEGS SYNDROME

Definition

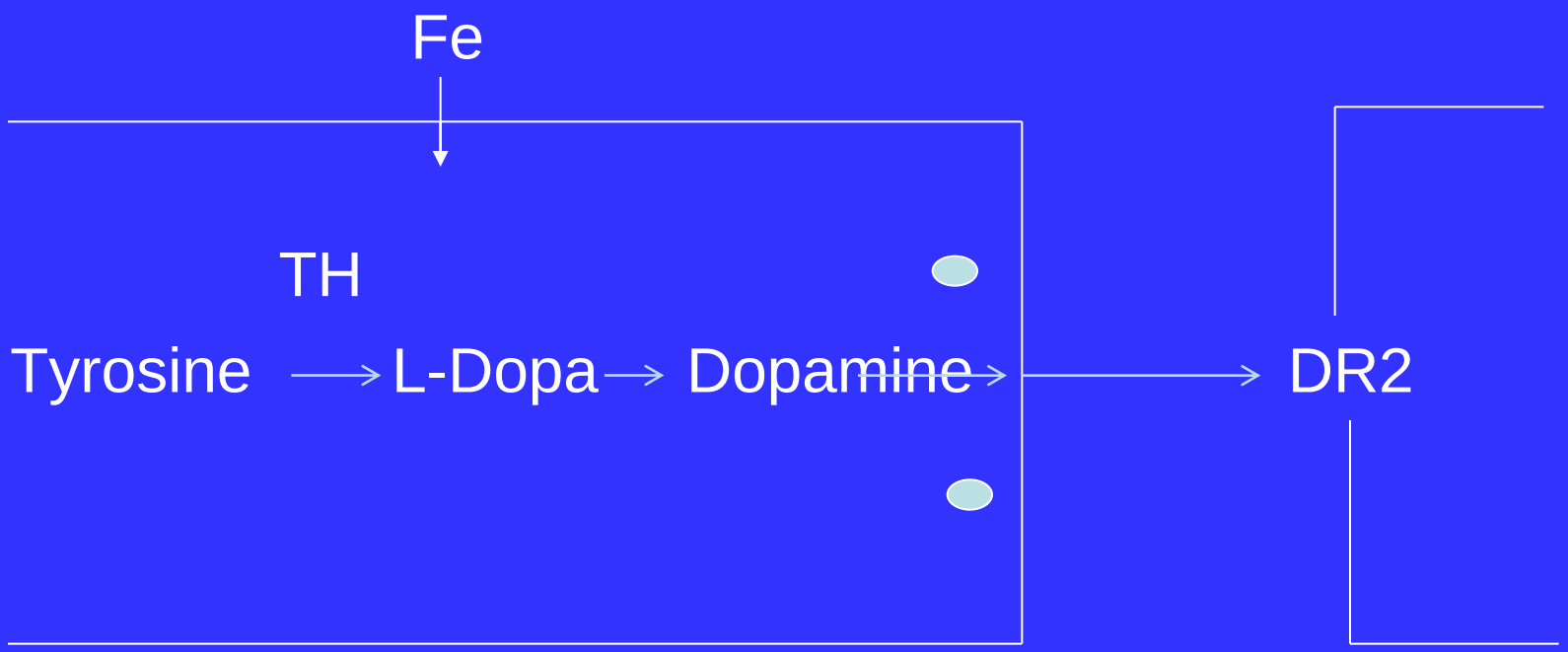
1. An urge to move the limbs, usually associated with parasthesias/dysthesias
2. Motor Restlessness
3. Symptoms exclusively while at rest, with relief (completely or partially) with movement.
4. Symptoms worse at night.

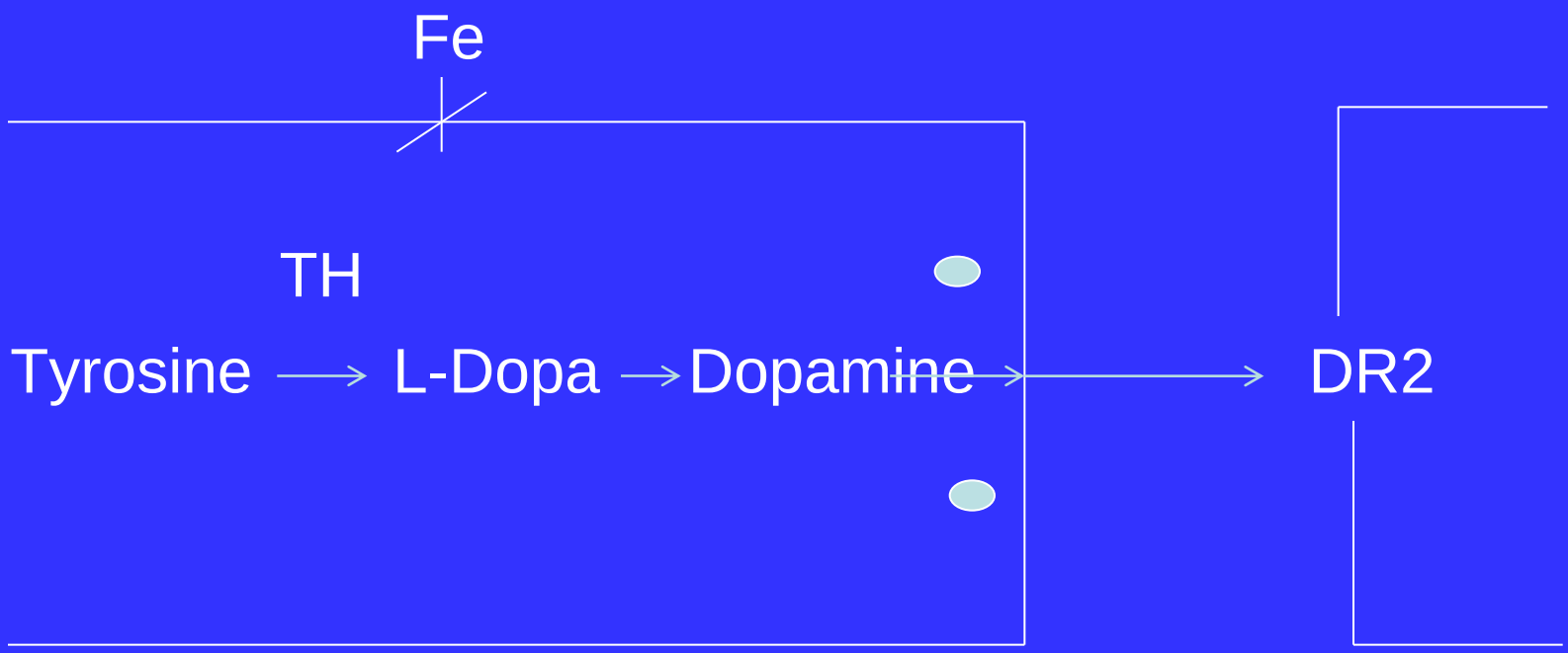
International RLS Study Group – Definition of RLS (1995)

Incidence in the general population :
2-15 %

Incidence in ESRD : 20-30 %

Mechanism is not completely understood


Fe
TH
Tyrosine
L-Dopa
Dopamine
DR2


Fe
TH
Tyrosine
L-Dopa
Dopamine
DR2

Management

Clonazapem

0.5mg – 1mg nocte

Dopamine agonists

- Ergot-Dopamine Agonists (Pergolide, Cabergoline)

- Non-Ergot Dopamine Agonists (Pramipexole, Ropinirole, Rotigotine)

Gabapentin

Two Level 1 studies have shown efficacy for Gabapentin in the treatment of RLS in Dialysis patients

- Study A – Placebo controlled – Thorp et al (2001)
- Study B – Gabapentin compared to Levo-dopa – Micozkadioglu et al (2004)

A 53 year old woman

- Type 2 Diabetes Mellitus
- Hypertension
- OA – mild
- ESKD – Diabetic Nephropathy
- HD 3/week for 5 years

Referred to clinic because of extreme :

1. Uraemic Pruritus
2. Restless Legs Syndrome
3. Diabetic PN
3. Very poor sleep

Gabapentin

Gabapentin commenced for all conditions at 200mg at the completion of each dialysis.

- Complete cessation of all symptoms and a markedly improved sleep

- Sleeping *“the best I have for a long time.”*

Care of the dying patient with ESKD

ESKD patients may die :

- Having been on dialysis

- Never having been on dialysis

Patients with ESKD on dialysis may die in many different ways

The family’s view of the manner of dying and the care given will have a major effect on their bereavement and will echo down the years in the way they view death.

A major sentinel event → Sudden death

The “negotiated withdrawal”

- George has been on dialysis for 6 months
- He is increasingly fatigued and more frail. No clear reversible cause.
- Further exacerbations of Chronic Airways Limitation.
- NSTEMI
- He presents with a gangrenous toe - post amputation, worsening gangrene… discussion about further surgery.

Nephrologist 1

“Its time to talk to him and his family about the future. We need to be honest. It is right to say to him that he could withdraw from dialysis at any time, that would be OK. We would then speak about what to expect from that point onwards including our care for he and his family.”

Nephrologist 2

“If he brings it up of course I will talk to him…but only if he raises it. It should come from him.”

It is important that any discussion about withdrawal is open and honest

at the patient’s own pace

and includes the family.

- What should I expect ?
- Will I suffer ?
- Will I drown in fluids ?
- How long will I live ?

Patients survive a variable time.

- If completely anuric – 7-10 days
- If still passing urine – weeks-months

“A crisis withdrawal”

Scenario 1

The major sentinel event occurs …

- Family prepared for imminent death
- Dialysis ceased
- Consensus that there will not be an escalation to ICU etc.

Scenario 2

The major sentinel event occurs…

- No discussion about withdrawal
- Waiting approach
- Patient dies on dialysis, the day of dialysis

This scenario is considerably assisted if there the patient has had prior conversations with their Nephrologist including

an Advance Care Plan

Creating and nurturing a Renal Supportive Care service

St George Hospital, Sydney, Australia

Collaboration between the departments of Renal Medicine and Palliative Medicine.

Formation of a Renal Supportive Care Clinic

March 2009

- Held every week
- Held in the Renal Unit
- Palliative Care Consultant, Advanced Trainee in Renal Medicine, Renal Supportive Care Nurse, Renal Social Worker, Renal Dietician

All patients with ESKD according to needs

Main categories of patients who are referred to the clinic :

- Patients who are on a conservative pathway
- Patients who need assistance in decision making around choosing dialysis or not
- Patients who are on dialysis and have cancer or other terminal conditions.

- Patients on dialysis who are experiencing symptoms which are difficult to manage

- Patients on dialysis who need assistance in decision making regarding withdrawing or continuing with dialysis

- Focus on symptom management
- Psychosocial support
- Preliminary discussions on ACP
- Access to Renal Social Worker and Renal Dietician

Ref No:

Date: __/__/__

Questionnaire POS-S (renal) — staff version

Below is a list of symptoms which the patient may or may not have experienced. Please record how these symptoms have affected the patient in the table below. Put a tick in the box to show how you think they have affected how they have been feeling **over the last week.**

	Not at all, no effect	**Slightly** — but not bothered to be rid of it	**Moderately** — limits some activity or concentration	**Severely** — activities or concentration markedly affected	**Overwhelmingly** — unable to think of anything else
Pain	❑	❑	❑	❑	❑
Shortness of breath	❑	❑	❑	❑	❑
Weakness or lack of energy	❑	❑	❑	❑	❑
Nausea (feeling like you are going to be sick)	❑	❑	❑	❑	❑
Vomiting (being sick)	❑	❑	❑	❑	❑
Poor appetite	❑	❑	❑	❑	❑
Constipation	❑	❑	❑	❑	❑
Mouth problems	❑	❑	❑	❑	❑
Drowsiness	❑	❑	❑	❑	❑
Poor mobility	❑	❑	❑	❑	❑
Itching	❑	❑	❑	❑	❑
Difficulty sleeping	❑	❑	❑	❑	❑
Restless legs or difficulty keeping legs still	❑	❑	❑	❑	❑
Feeling anxious	❑	❑	❑	❑	❑
Feeling depressed	❑	❑	❑	❑	❑
Changes in skin	❑	❑	❑	❑	❑
Diarrhoea	❑	❑	❑	❑	❑
Any other symptoms?	❑	❑	❑	❑	❑
.....	❑	❑	❑	❑	❑
.....	❑	❑	❑	❑	❑

Which symptom has affected the patient the most? .....

Which symptom, if any, has improved the most? .....

Teaching programme for Junior Medical Staff, including Nephrology Trainees on all aspects of Renal-Supportive Care

Preparation of documents :

(a) End of Life Pathway for Renal Patients

(b) Commonly used Palliative medications in the context of CKD

(c) A Renal-Palliative Care Reader

Annual Renal Memorial Service

Annual Renal Palliative Care Symposium

2010 - 2014

Renal Supportive Care Curriculum

- Master Class for trainees 2015

What are the best books and materials in this area ?

Chambers EJ, Germain M, Brown E (eds)

Supportive Care for the Renal Patient

2nd edition, 2010

Oxford University Press

Brown E, Murtagh F, Murphy E.(eds) *Kidney Disease – From Advanced Disease to Bereavement.* 2nd ed, 2012. Oxford Handbooks.

Clinical Practice Guideline on Shared Decision-Making in the Appropriate Initiation of and Withdrawal from Dialysis

Renal Physicians Association of the USA and the American Society of Nephrology. 2010.

Australasian Renal Supportive Care Position Statement

Endorsed by Kidney Health Australia

Endorsed by the Australian and New Zealand Society of Nephrology

Nephrology 2013;18(6)

Davison SN et al.

Executive summary of the KDIGO Controversies Conference on Supportive Care in CKD : developing a roadmap to improving quality care.

Kidney International, Advance online publication, April 29 2015.

Conclusion

A mutual acknowledgement of need-

The role of Palliative Care/supportive care in ESRD

The last decade has seen considerable levels of advocacy, attitudinal shift, research, publications and collaboration

This approach may come at multiple points in the trajectory of the disease

The core competencies in a “Palliative approach” to patients with ESKD

can and should be acquired by all doctors working with these patients.

Applies to patients who are being managed either with dialysis or conservatively

The family will remember forever your involvement, your demeanour and your compassion

Your patients remain your patients until their death