Avtagande njurfunktion och övergång i njurersättande behandling

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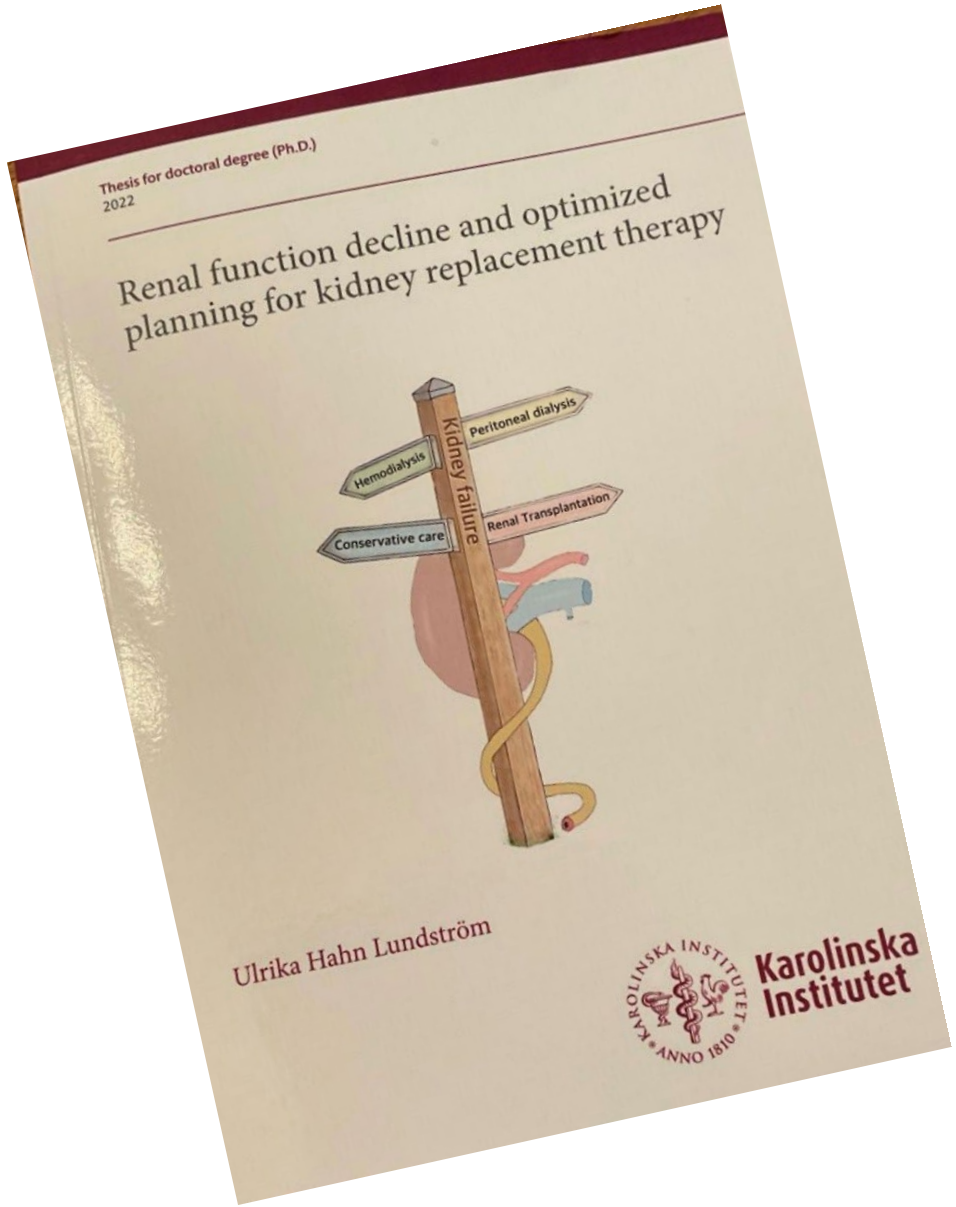


Aim:

"To study factors influencing the planning and management of KRT including vascular accesses, in order to improve the prognosis and quality of life for the CKD patient"

Study I- Impact of progression rate

Fast progression rate associated to increased risk for KRT

Age reduces the risk for KRT

Low renal function increases risk for KRT

Lundström *et al. BMC Nephrology* (2017) 18:59
DOI 10.1186/s12882-017-0473-1

BMC Nephrology

RESEARCH ARTICLE Open Access

Low renal replacement therapy incidence among slowly progressing elderly chronic kidney disease patients referred to nephrology care: an observational study

Ulrika Hahn Lundström[1†], Alessandro Gasparini[1†], Rino Bellocco[2,3], Abdul Rashid Qureshi[1], Juan-Jesus Carrero[1,4] and Marie Evans[1,5*]

Five-year cause specific probabilities of KRT

Cause-specific probability of RRT		Non - progressors			Progressors		
		Age			Age		
	CKD stage	<65	65-75	>75	<65	65-75	>75
	IIIb	14.5	9.6	6.8	29.7	20.2	14.6
	IV	27.4	18.6	13.4	51.3	36.9	27.6
	V	47.1	33.4	24.9	75.9	59.8	47.3

SLOW

FAST

Three trajectory classes

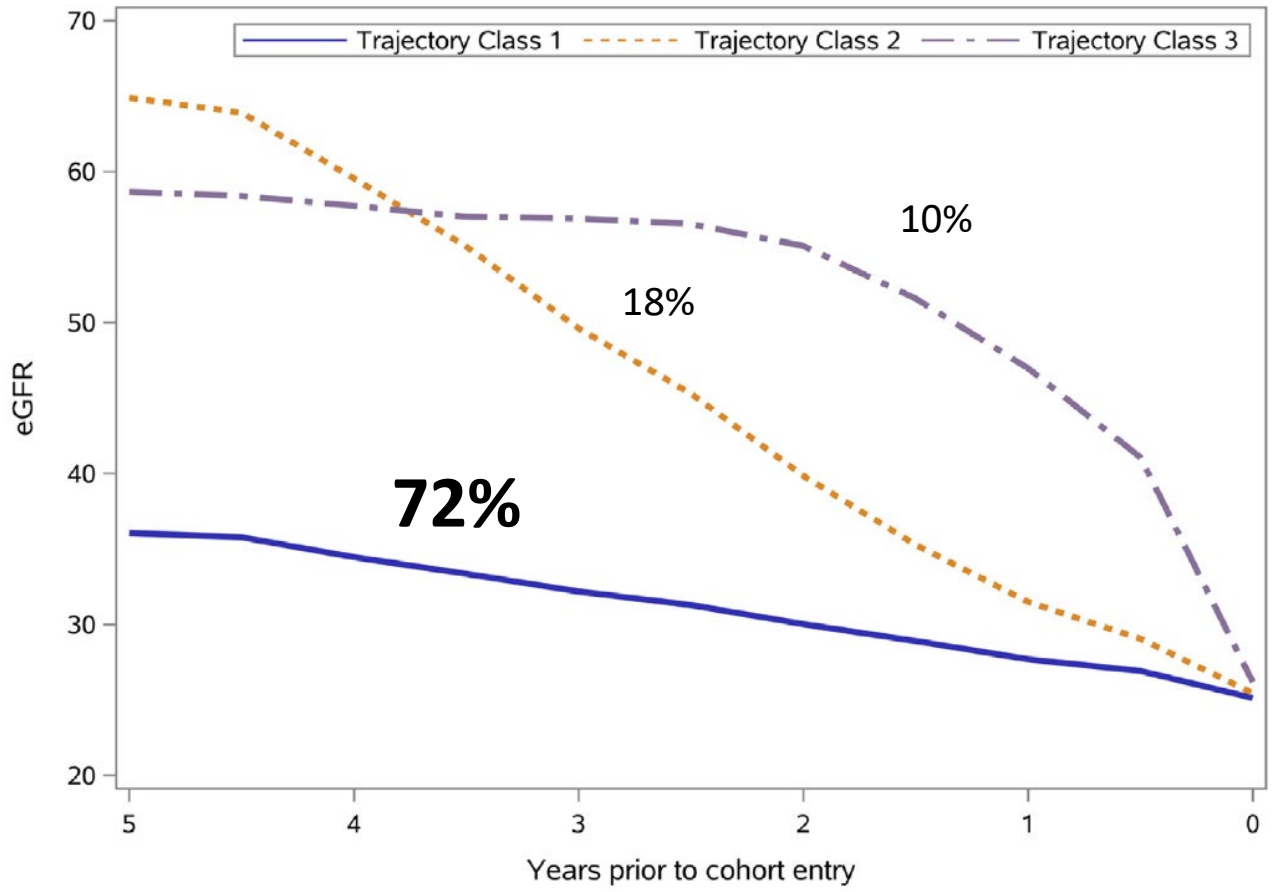


Figure 2.
Functional characterization of kidney function trajectories yields 3 trajectory classes: n=26246

1 **Consistent slow** decline; 72%
2 **Consistent fast** decline; 18%
3 **Early non-decline and late fast** decline; 10%

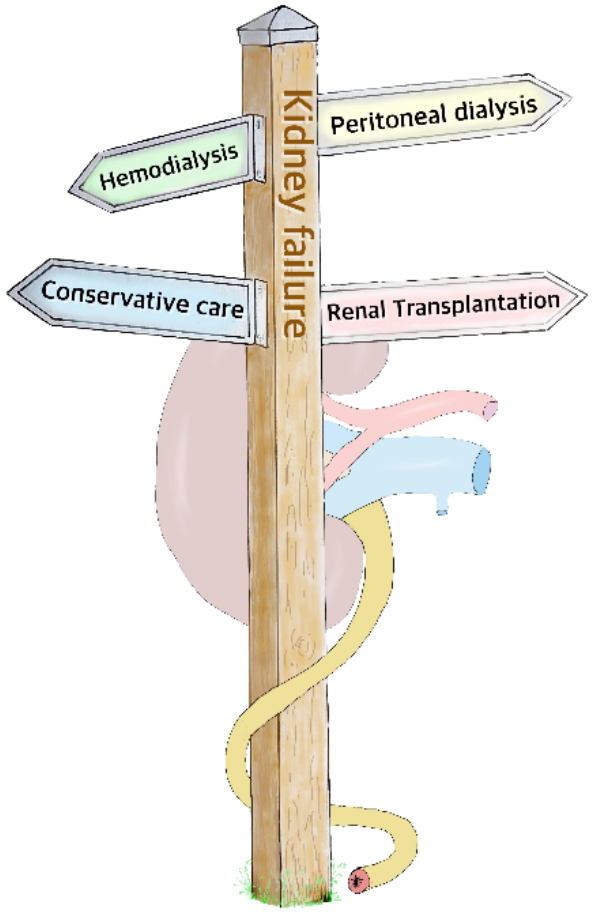
Abbreviation: eGFR, estimated glomerular filtration rate.

Xie et al. Am J Kidney Dis. 2016;68(2):219-228

Study I- clinical implications

Importance of ***individualized*** predialysis assessment to optimize advice and care

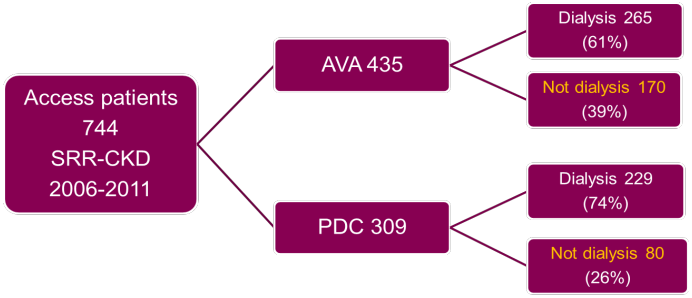
When planning for future care we need to consider ***progression rate*** and ***age***



Artist Dr. John Sandberg

Study II- AV access and progression

Predialysis patients in Stockholm
100 days before and after access surgery



Both AVA and PD had slower eGFR decline

No significant differences in AVA compared to PDC

Nephrol Dial Transplant (2021) 36: 275–280
doi: 10.1093/ndt/gfz221
Advance Access publication 30 October 2019

Arteriovenous access placement and renal function decline

Ulrika Hahn Lundström [1], Ulf Hedin[2], Alessandro Gasparini[3], Fergus J. Caskey[4], Juan-Jesus Carrero[5] and Marie Evans [1]

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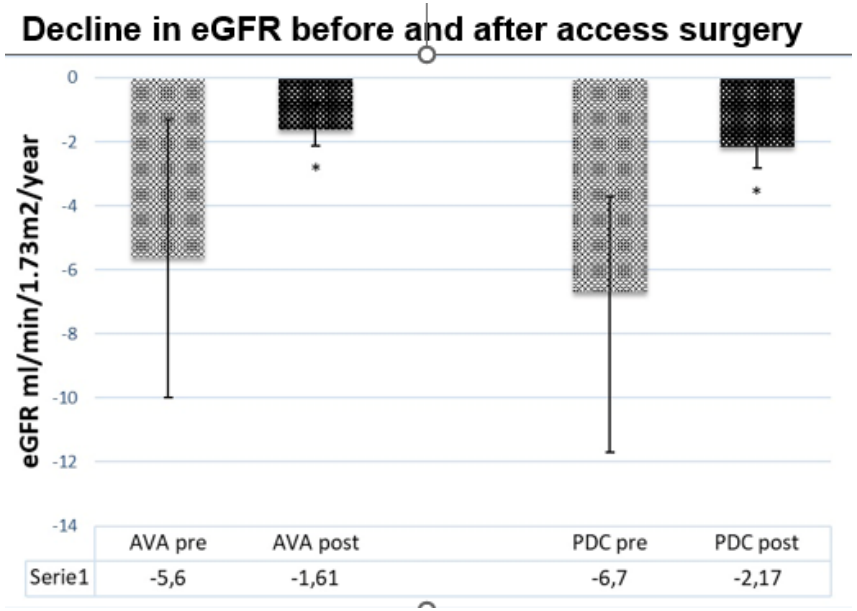


Study II- clinical implications

The importance of pre-dialysis care

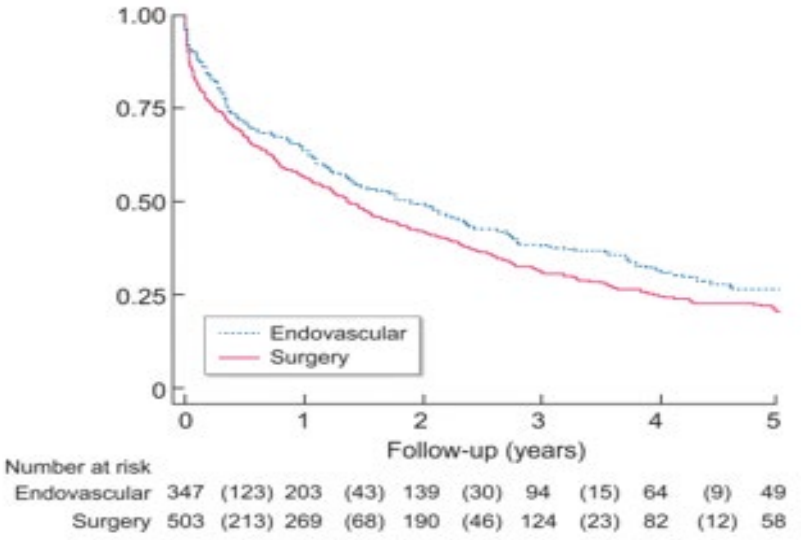
Some effects of AVA creation may occur, no significant influence on eGFR decline in our study population

The *need for dialysis* remains the main determinant for timing of access surgery, no reason for early access creation to reduce progression rate

Study III - Access thrombosis

Hemodialysis patients with working AV access experiencing first thrombosis

Time to access abandonment, AV access thrombosis treated with surgical or endovascular intervention



Nephrology Dialysis Transplantation (2022) 0: 1–9
https://doi.org/10.1093/ndt/gfac036
Advance Access publication date 9 February 2022

Surgical versus endovascular intervention for vascular access thrombosis: a nationwide observational cohort study

Ulrika Hahn Lundström[1], Gunilla Welander[2], Juan Jesus Carrero[3], Ulf Hedin[4] and Marie Evans[1]

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Results

Access abandonment	Endovascular OR (95%CI)	Surgical intervention OR (95%CI)
30 days	1 (ref)	1.63 (1.11–2.33)
90 days	1 (ref)	1.44 (1.05–1.97)
1 year	1 (ref)	1.25 (0.94–1.66)

Adjusted odds ratio

No significant difference in time to next intervention or between subgroups

Conclusion Endovascular intervention is associated with consistent short- and long-term access benefit in hemodialysis patients with AV access thrombosis.

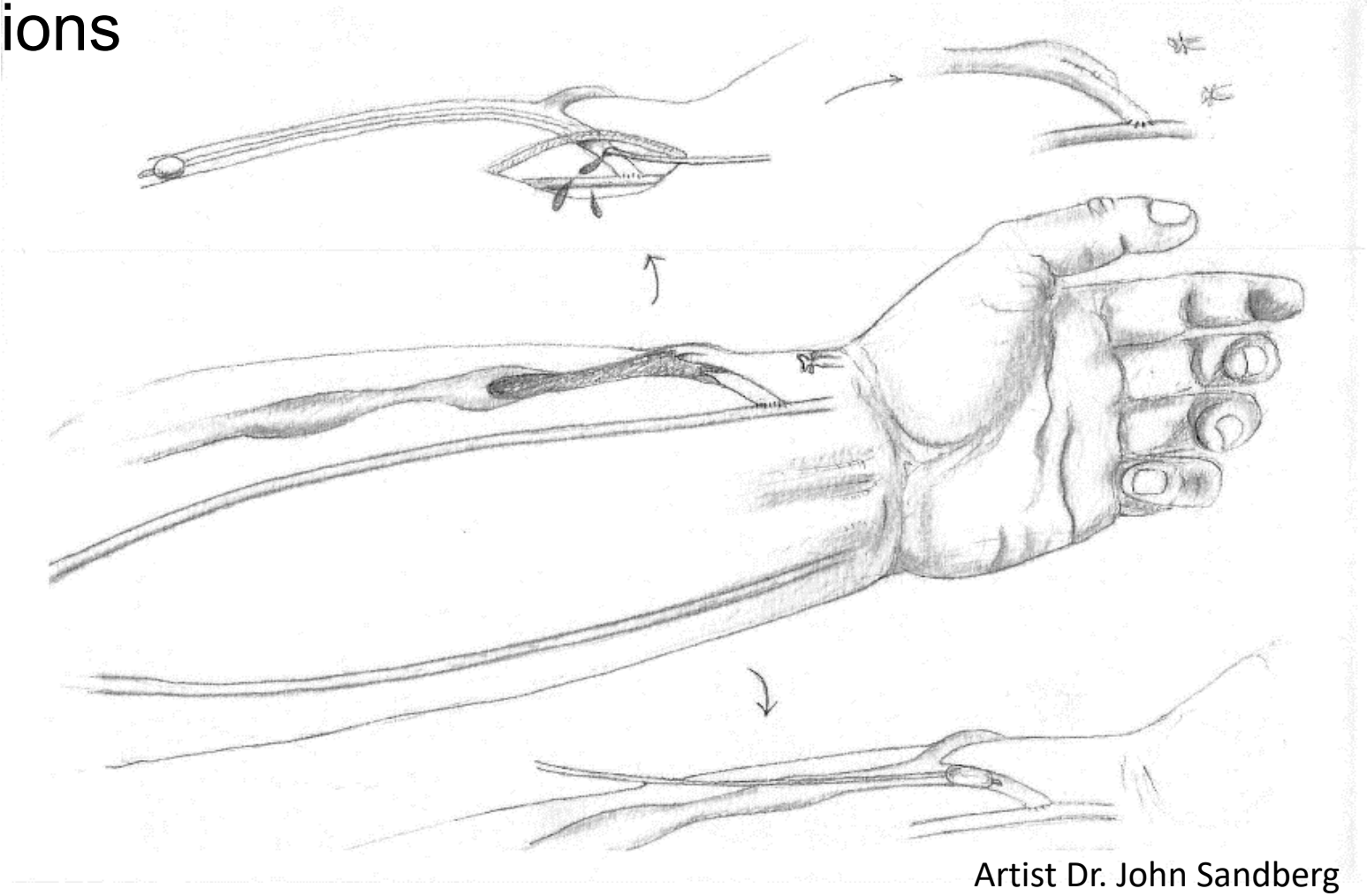
NEPHROLOGY DIALYSIS TRANSPLANTATION

Hahn Lundstrom, U., et al. NDT (2022)
@NDTSocial

Study III- clinical implications

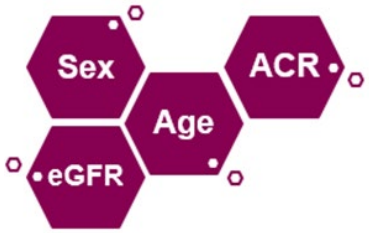
Endovascular methods are ***not inferior*** to open surgical interventions

Endovascular methods and the possibility of both intervention methods ***should be available*** in more centers



Artist Dr. John Sandberg

Studie IV- Prediktionsmodell KFRE in access planning



Patients experiencing ***KFRE>40%*** *risk for KRT* in 2 years (n= 7,229)
or ***eGFR15*** (n= 9,281) for the first time

SRR-CKD 2008-2020 (n=28,798), SRR-Access

Kidney Failure Risk Equation for vascular access planning; a nationwide observational cohort study from Sweden

Ulrika Hahn Lundström[1], Chava L. Ramspek[2], Friedo W. Dekker[2], Juan Jesus Carrero[3], Ulf Hedin[4], Marie Evans[1].

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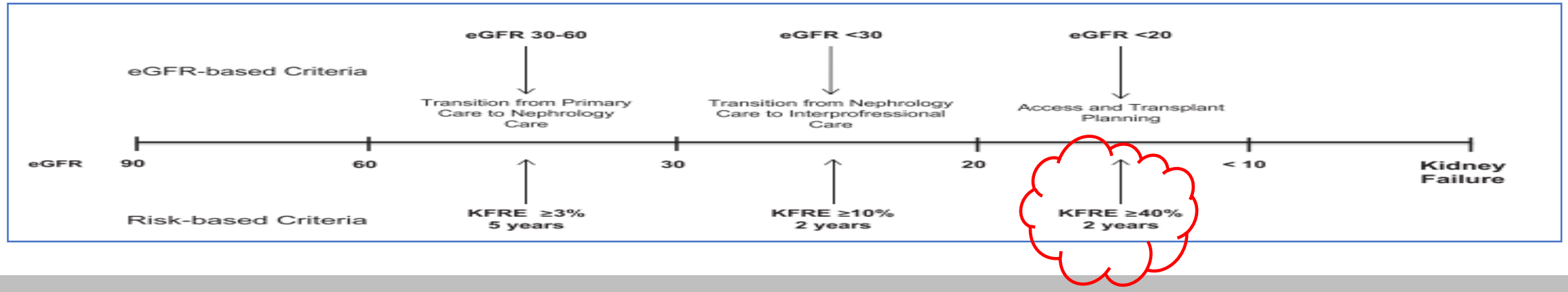
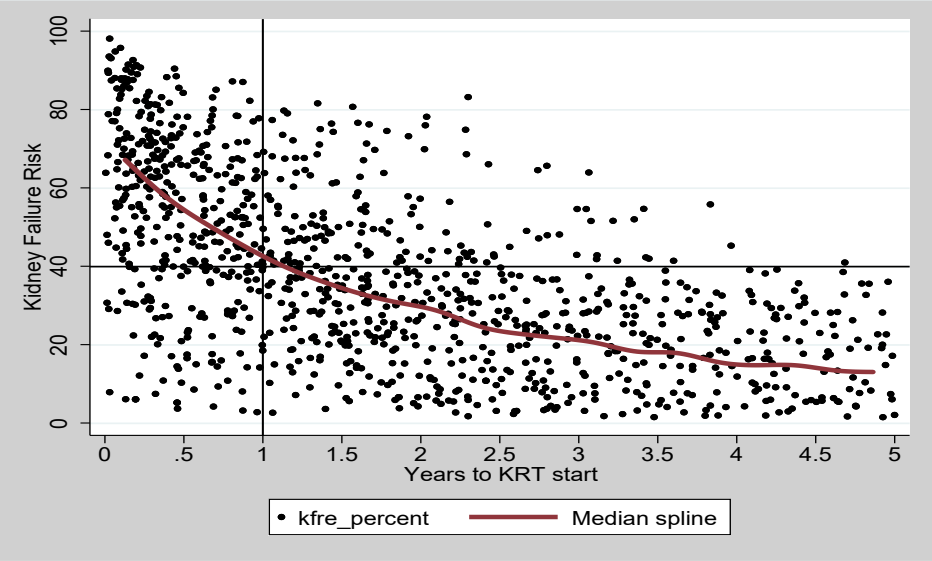
4. Dep of Molecular Medicine and Surgery, Karolinska Institutet, Stockholm, Sweden

Outcome: Cumulative incidence of KRT initiation, test diagnostics and mortality within 2 years



Studie IV- Prediktionsmodell KFRE in access planning- results

Development of KFRE before Hemodialysis initiation



Diagnostics of KFRE40 eGFR15 and KFRE40 + registered plan for KRT

	KFRE>40%		eGFR<15ml/min/1.73m²		KFRE >40%+ plan	
	Sensitivity (%)	Specificity (%)	Sensitivity (%)	Specificity (%)	Sensitivity (%)	Specificity (%)
	75	90	88	79	80	65

	KFRE>40%		eGFR<15ml/min/1.73m²		KFRE >40%+ plan	
Time (months)	PPV (%)	NPV (%)	PPV (%)	NPV (%)	PPV (%)	NPV (%)
12	36	94	28	99	42	64
24	56	93	44	98	67	62

Study IV- clinical implications

KFRE>40%
warning flag, patient entering last heat of pre-dialysis race
time for action

KFRE>40% + clinical judgement
would optimize timing of AV access creation
and increase share of patients starting KRT in working access

Conclusions thesis

Study I
Risk for KRT varied with progression rate and age
Progression rate important to consider in individualized pre-dialysis care

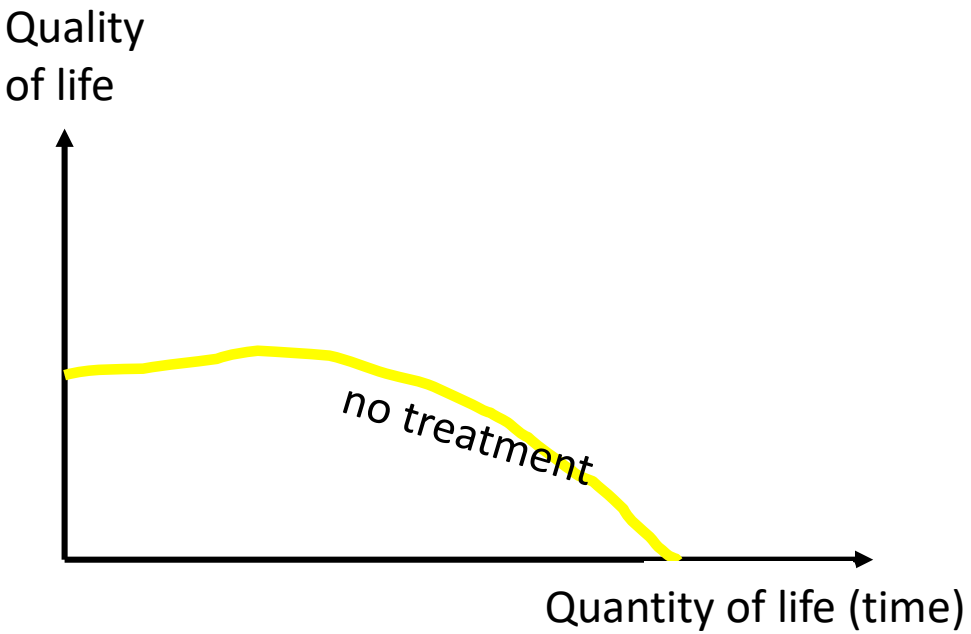
Study II
Access creation was associated to reduced progression rate
No significant difference for Arteriovenous compared to Peritoneal dialysis access creation

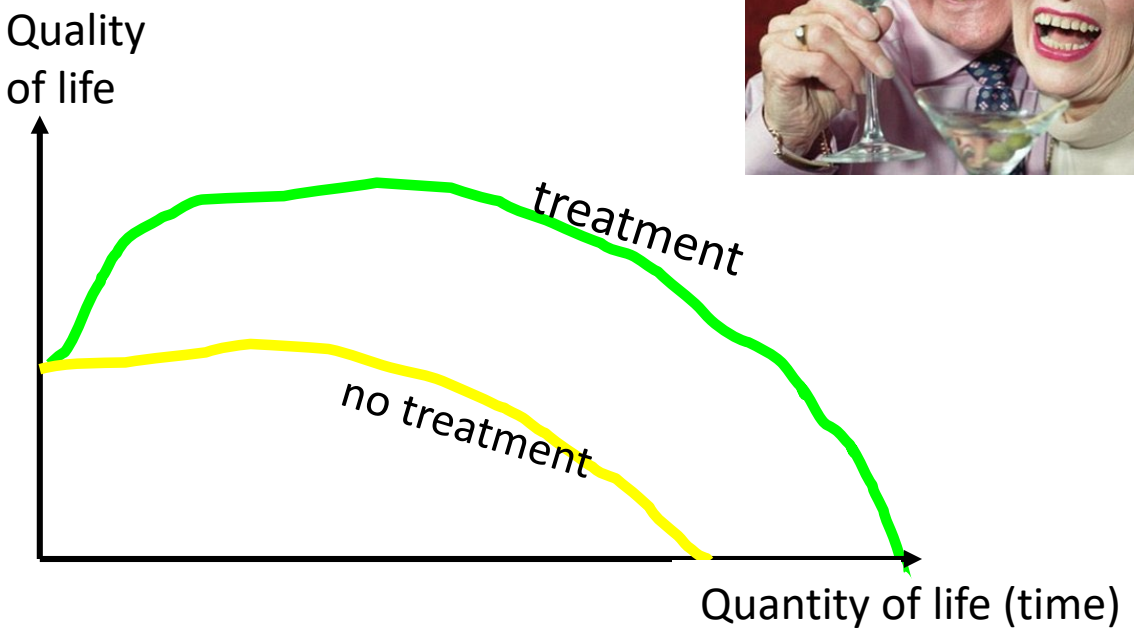
Study III
Endovascular thrombosis intervention was associated to improved access survival

Study IV
Risk prediction models and clinical judgement could optimize access timing
KFRE40 associated to superior specificity and PPV compared to eGFR 15
A new prediction model incorporating progression rate and survival is needed

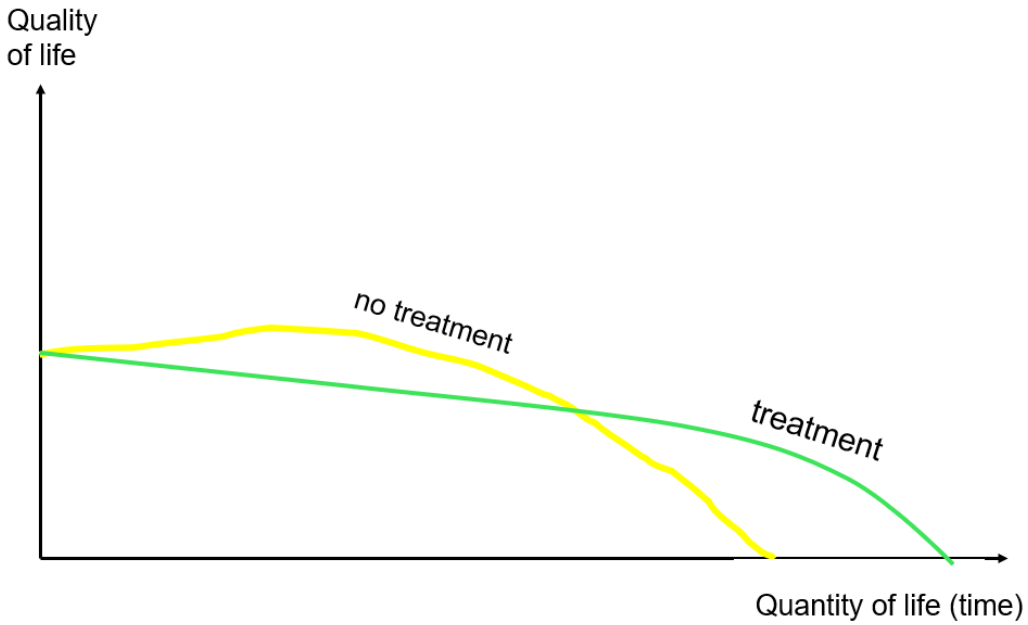
“Prediction is very difficult especially if it´s about the future”

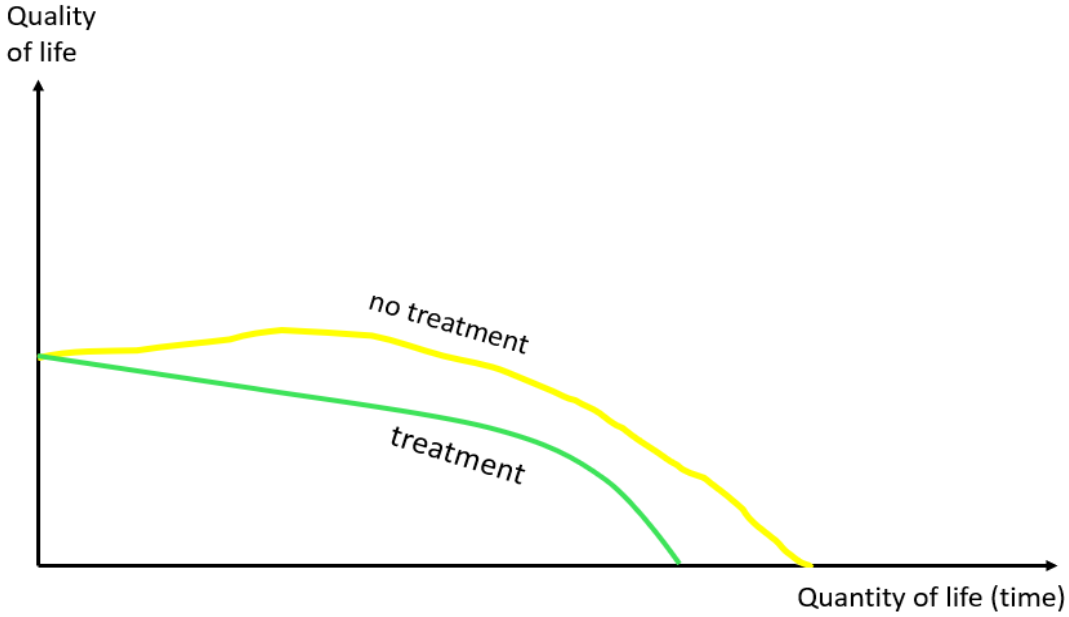
Niels Bohr





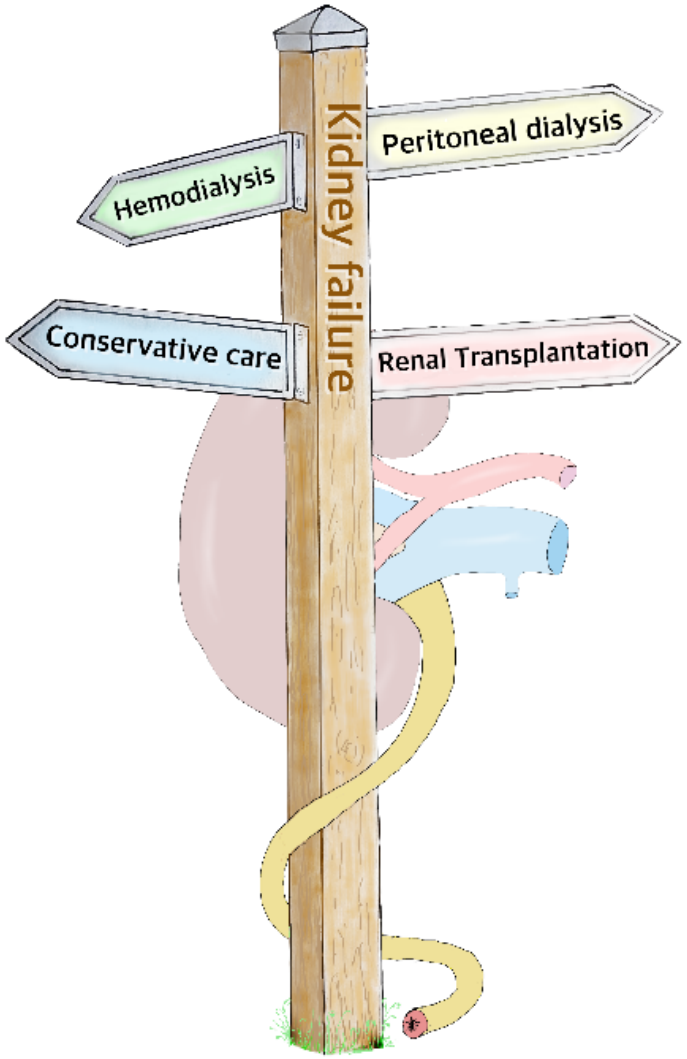
“Prediction is difficult, especially about the prognosis of the individual patient”
-common knowledge of all nephrologists *Prof. Björn Odvar Eriksen*

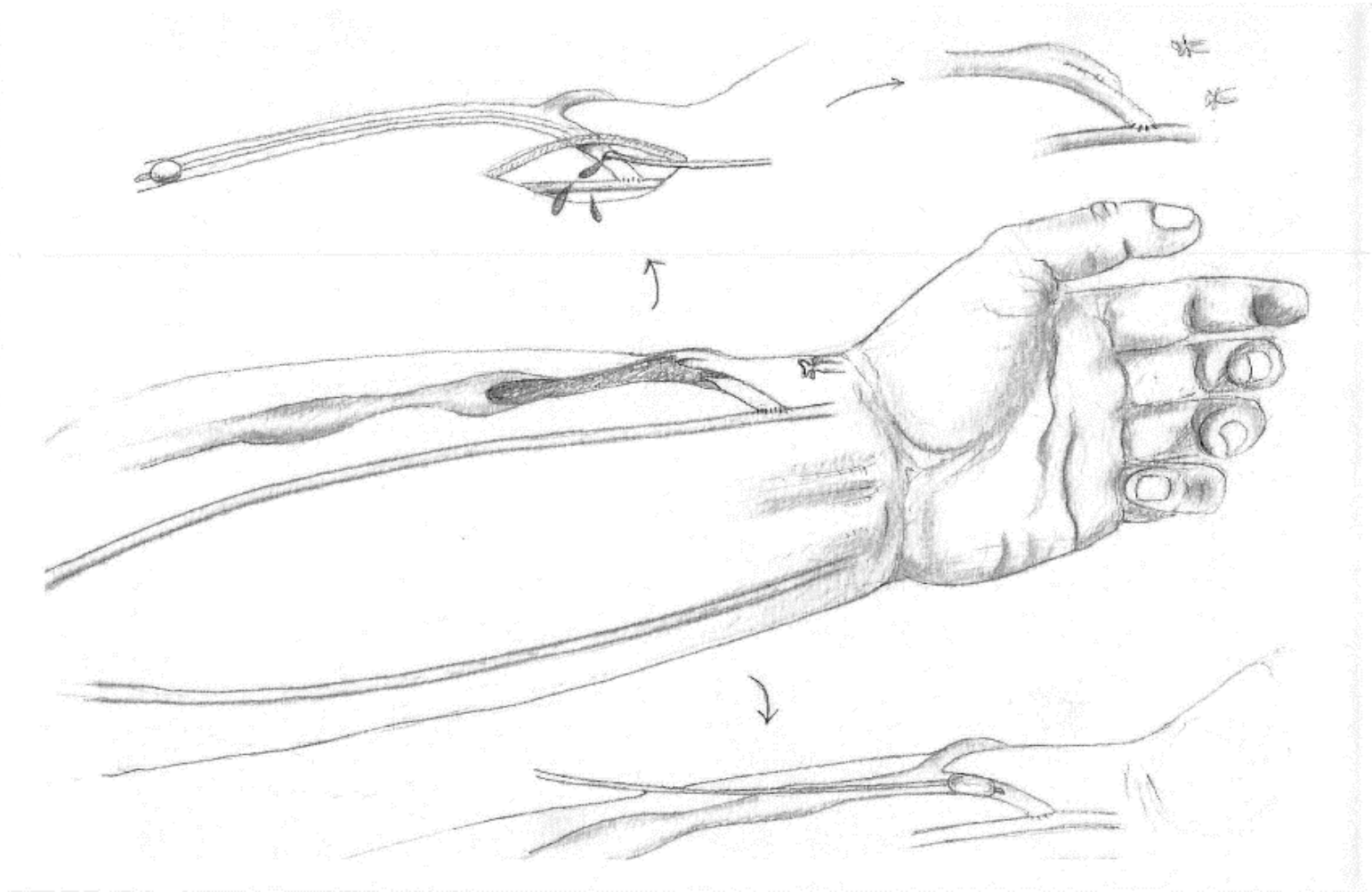




“The goal of forecasting is not to predict the future,
but to tell you what you need to know to take meaningful actions in the present”

Paul Saffo





Artist: Transplantations- och accesskirurg Dr. John Sandberg

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- Multidisciplinary predialysis care
- KDOQI 2019; Individualized ESRD **Life-PLAN**
- Patient- Life- Access- Needs
- Each vascular access
  - Vessel preservation
  - Insertion/ creation
  - Contingency
  - Succession