

Kidney's don't fail me now...

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Objectives

The scope of the problem

- **Amputations in dialysis & CKD**
- **Mortality after amputation**
- **Precursors to amputations**
- **Prevention opportunities**

General Population vs Dialysis:foot complications

General population

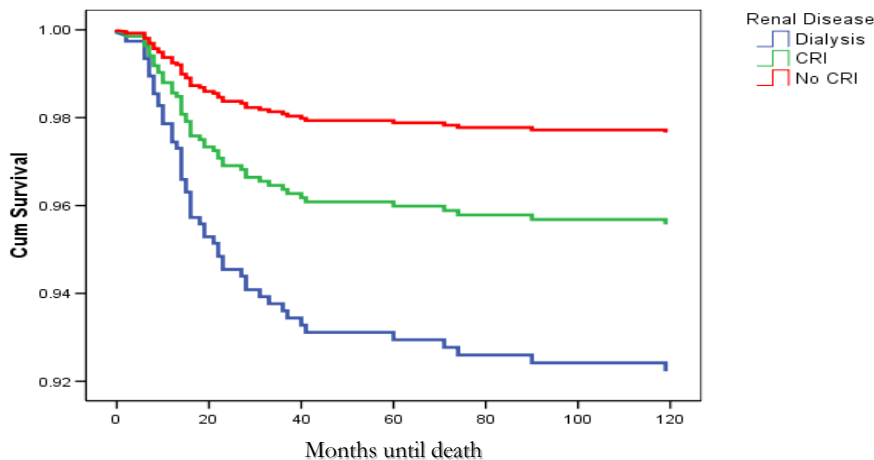
- Ulcer incidence 2-7%
- Amputation incidence 1% - 1 per 100

Dialysis population

- Ulcer incidence 20%
- Amputation incidence 10% - 10 per 100

Ndip: Diabetes Care 2010
Lavery, Diabetes Care 2004
Peters, Lavery, Diabetes Care, 2001
Uciolli, Diabetes Care 1995

Survival Function for Renal Disease



Lavery LA: The impact of renal disease on survival after amputation. Diabetes Care 2010

Dialysis: death after amputation

Survival	Dialysis	Chronic Kidney Disease	No Renal Disease
1 Year	49.2%	25.4%	14.4%
2 Year	57.8%	32.9%	23.0%
3 Year	71.1%	43.7%	26.8%
5 Year	82.8%	59.1%	39.7%

Lavery LA: The impact of renal disease on survival after amputation. Diabetes Care 2010

Dialysis: impact on amputation level

Amputation Level	Dialysis N=128	Chronic Kidney Disease N=389	No Renal Disease N=526
Foot	28.9%	40.4%	53.8%
BKA	43.8% 71%	35.7% 62.7%	23.9% 43.1%
AKA	27.3%	27.0%	19.2%

Lavery LA: The impact of renal disease on survival after amputation. Diabetes Care 2010

Dialysis: death after amputation

Outcomes N=1043	Dialysis N=128	Chronic Renal Insufficiency N=389	No Renal Disease N=526
1 Year	49.2%	23.4%	14.4%
2 Year	57.8%	32.9%	23.0%
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Disease management in challenged populations

Author	Journal	Outcomes
Rith-Najarian	J Fam Prac 1998	48% amputation
Patout	Diabetes Care 2000	49% ulceration 79% amputation 89% admissions
Cherry	Diabetes Tech Therap 2002	32% admissions 34% ER visits 49% out-patient visits
Lavery	Diabetes Research Clin Pract 2005	52% amputation 38% admissions 28% length of stay

Traditional Prevention Strategies

- Risk Assessment
- Education -“do’s-don'ts”- Self-care practices
- Protective shoes – insoles
- Regular foot assessment

Advanced Strategies

- Temperature monitoring
- Evaluation of foot morphology