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Presenting Author: Charles A. Herzog

Department/Institution: Chronic Disease Research Group, Minneapolis Medical Research Foundation

Address: 914 South 8th Street, Suite D-206

City/State/Zip/Country: Minneapolis, MN, 55404, United States

Phone: 612-347-3903 **Fax:** 612-347-5878 **E-mail:** nas@nephrology.org

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Title: Risk and Outcome of Infected Pacemakers and Defibrillators in Dialysis Patients

Charles A. Herzog, MD* ^{1,2}, Shuling Li, MS ¹ and Allan J. Collins, MD* ^{1,2}. ¹ Chronic Disease Research Group, Minneapolis Medical Research Foundation, Minneapolis, MN and ² Department of Medicine, University of Minnesota, Minneapolis, MN .

Cardiac disease is the largest cause of death in dialysis patients, and 60% of cardiac deaths are attributed to arrhythmia/cardiac arrest. A clinical trial of implantable cardioverter-defibrillators (ICD-s) for primary prevention of sudden cardiac death in dialysis pts is indicated, but the rate of device complications is unknown. Dialysis patients have markedly increased risk of infections; there are few data relating to

infected pacemaker (PM) and ICD's in dialysis pts. We searched the 100% ESRD (End Stage Renal Disease) sample of the Medicare database to identify prevalent dialysis pts receiving an index PM implant (n=13,980) in 1991-2001 or ICD (n=1400) in 1996-2001. Infection-free survival and mortality after device infection were estimated by life table method. **Results:** Demographics: *PM*: age 75+ (39%), male (49%), white (67%), diabetic ESRD (45%); *ICD*: age 75+ (23%), male (66%), white (66%), diabetic ESRD (41%). Device infections occurred in 422 pts (2.7%) within two years after implant: *PM* 91-95 (2.0%), *PM* 96-01 (2.9%), *ICD* 96-01 (3.8%). The Table shows device infection-free survival and mortality after device infection. **Conclusion:** The incidence of device infections in dialysis pts is 1-2%/yr. The risk of *PM* and *ICD* infection should not be a major deterrent to device implant in dialysis pts.

Device Infection-free Survival (%)		Survival after Device Infection (%)			
PM 1991-95	PM 1996-01	ICD 1996-01	PM 91-95	PM 96-01	ICD 96-01
n=4,616	n=9,364	n=1,400	n=95	n=274	n=53
months					
6 (98.3)	97.4	97.0	57.7	55.4	66.6
12 (97.8)	96.8	95.7	47.0	40.7	48.7
18 (97.4)	96.1	95.5			
24 (97.2)	95.5	94.6			