Electronic Supplementary Material

Ferumoxytol Is Not Retained in Kidney Allografts in Patients Undergoing Acute Rejection

Journal: Molecular Imaging and Biology

Maryam Aghighi[1], Laura Pisani[1], Ashok J. Theruvath[1], Anne M. Muehe[1], Jessica Donig[1], Ramsha Khan[1], Samantha J. Holdsworth[1], Neeraja Kambham[2], Waldo Concepcion[3], Paul C. Grimm[4], Heike E. Daldrup-Link[1]*.

Affiliations:

[1] Department of Radiology, Pediatric Molecular Imaging Program at Stanford (@PedsMIPS), Stanford University School of Medicine, Stanford, CA, USA

[2] Department of Pathology, Stanford University, Stanford, CA, USA

[3] Department of Surgery, Stanford University, Stanford, CA, USA.

[4] Department of Pediatrics, Stanford University, Stanford, CA, USA.

Corresponding author:

Heike E. Daldrup-Link*, MD, PhD. H.E.Daldrup-Link@stanford.edu

*Department of Radiology, Lucile Packard Children's Hospital, Stanford School of Medicine, 725 Welch Rd, Stanford, CA 94305-5654, Ph (lab): (650)723-1127, fax: (650) 725-8957

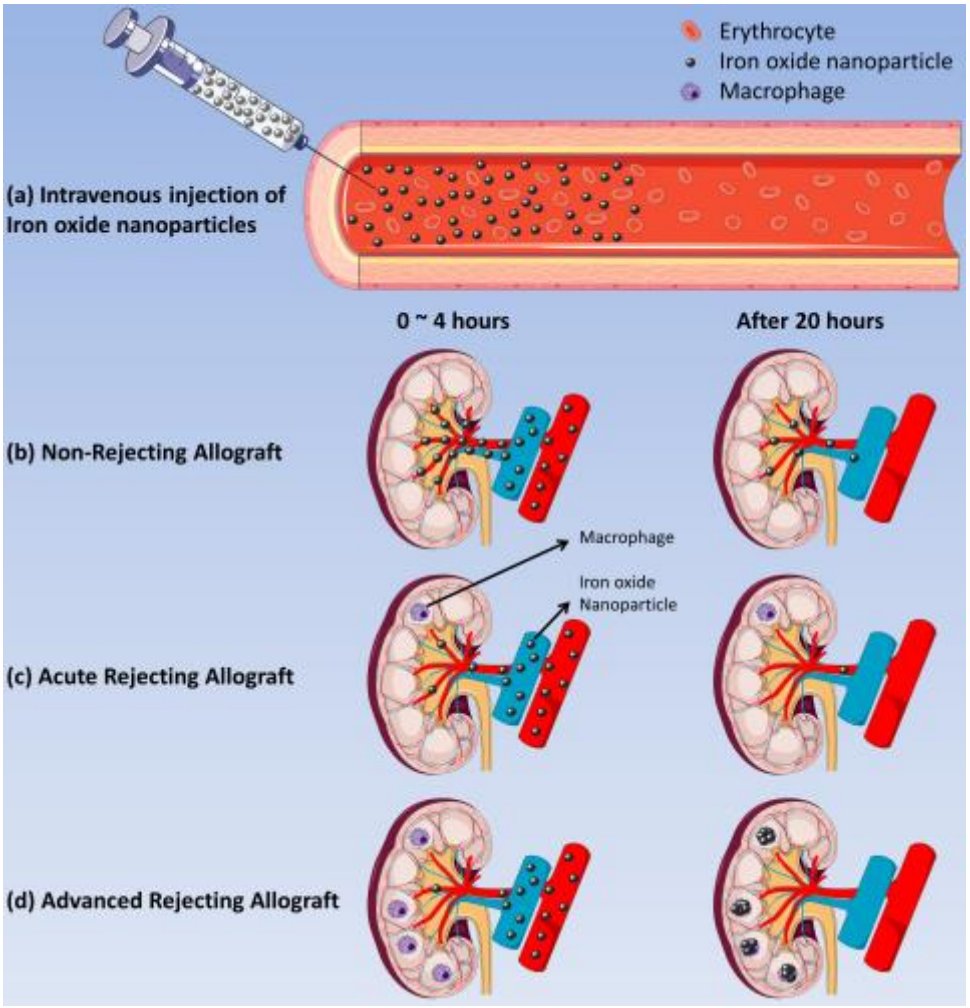

Figure S1: Schematic of Iron Oxide Nanoparticle (IONP) Pharmacokinetics in Renal Allografts: **a** Intravenous injection of IONPs, **b** Non-rejecting allograft: Intravascular IONPs causes perfusion-dependent organ enhancement at 4 h post injection (p.i.), which slightly decreases at 20 h p.i., **c** Early rejection with few macrophages: Reduced organ perfusion at 4 h p.i. and insignificant IONP retention at 20 h p.i. **d** Advanced rejection with marked macrophage infiltration: Reduced organ perfusion at 4 h p.i. and significant IONP retention in prevalent macrophages at 20 h p.i.

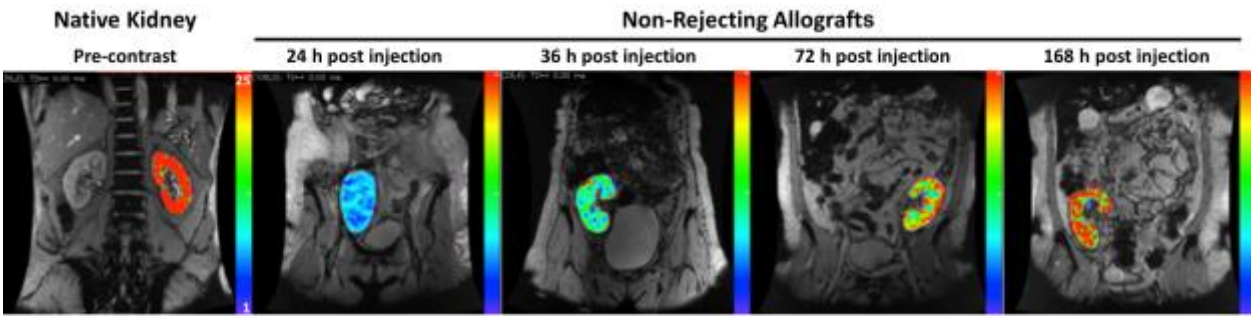

Figure S2: T2* relaxation time maps, superimposed on coronal T2*-weighted SPGR images of native kidney without ferumoxytol and non-rejecting allografts at progressing time points after intravenous injection of ferumoxytol.