

Supplemental Results

Supplemental Video 1A. Doppler recording of a sham animal (60 min post-sham operation procedure). The whole kidney blood flow is intact. RED: arterial flow, BLUE: venous flow.

Supplemental Video 1B. Doppler recording of an IR animal (post-IR 60 min). Markedly reduced blood flow is present in the entire kidney. However no distinction can be made between the cortex, outer-, and inner medulla.

Supplemental Video 2A. Original contrast mode recording of the pre-ischemic kidney (Mouse # IR5). The entire kidney is well perfused. Following the “Burst” the entire kidney fills-in with the contrast agent rapidly. (Panel on the left shows B-mode imaging; panel on the right, represents the contrast image).

Supplemental Video 2B. Original contrast mode recording of the Mouse # IR5 kidney, 60 min post-IR. Impaired perfusion is seen in the entire kidney, following the “Burst” reduced contrast agent fill-in.

Supplemental Video 2C. Original contrast mode recording of the Mouse # IR5 kidney, 24 hrs post-IR. Partial recovery of the microvascular perfusion can be observed on the contrast recording.

Supplemental Video 3A. Original contrast mode recording of the pre-ischemic kidney of an animal (Mouse # IR7) that succumbed to the ischemia. The entire kidney is well perfused. Following the “Burst” the entire kidney fills-in with the contrast agent rapidly.

Supplemental Video 3B. Original contrast mode recording of the Mouse # IR7 kidney, 60 min post-IR. In this animal the microvascular perfusion reduction was much

more severe, compared to other animals. The contrast recording shows close to no perfusion in the kidney. This animal died 24 hr post-IR.

Supplemental Video 4A. Original contrast mode recording of the baseline kidney (Mouse # C1). The entire kidney is well perfused. Following the “Burst” the entire kidney fills-in with the contrast agent rapidly.

Supplemental Video 4B. Original contrast mode recording of the Mouse # C1 kidney, at Control - 60 min. The entire kidney is well perfused.

Supplemental Video 4C. Original contrast mode recording of the Mouse # C1 kidney, at Control - 24 hr. The entire kidney is well perfused.