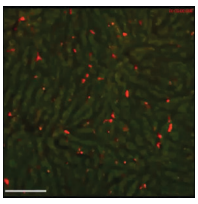
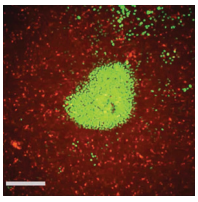
SUPPLEMENTAL MATERIAL

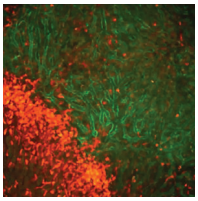
Dal-Secco, http://www.jem.org/cgi/content/full/jem.20141539/DC1



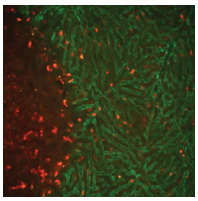
Video 1. Patrolling of the liver vasculature by CCR2$^+$ monocytes under basal conditions. Under control conditions, a population of RPF$^+$ cells can be observed patrolling the liver vasculature in *Ccr2$^{RFP/+}$* mice. Autofluorescent hepatocytes (green); RFP$^+$ monocytes (red); scale bar, 100 µm. 4D imaging confirms these cells are patrolling within the liver vasculature. Endothelium (blue); RFP$^+$ monocytes (red).



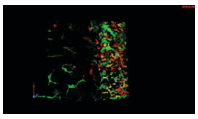
Video 2. Early monocyte response to focal sterile injury in the liver is characterized by a slow accumulation of monocytes around the lesion site. Time-lapsed SD-IVM imaging of a *Ccr2$^{RFP/+}$* mouse during the first 4 h after focal sterile injury in the liver shows a slow recruitment of patrolling CCR2$^+$ monocytes to the injury site. Focal necrotic injury labelled with Sytox (green); RFP$^+$ monocytes (red).



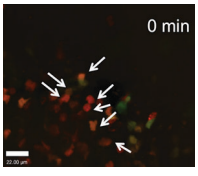
Video 3. Meandering behavior of CCR2$^+$ monocytes around the site of a focal necrotic injury in the liver. SD-IVM of a *Ccr2$^{RFP/+}$* mouse shows that CCR2$^+$ cells can be observed crawling in-and-out of a monocytic ring that forms around a focal sterile necrotic lesion 24 h after injury. Additionally, CCR2$^+$ monocytes can be observed meandering around within the ring surrounding the injury. Vasculature labelled with FITC-conjugated anti-CD31 (green); RFP$^+$ monocytes (red). Injury site is located in the lower left corner of the image.



Video 4. CCR2-deficeint monocytes fail to accumulate around and within the site of focal necrotic injury in the liver. SD-IVM of a *Ccr2$^{RFP/RPF}$* mouse demonstrates that RFP$^+$ cells fail to recruit to the site of injury and form a ring surrounding the lesion. RFP$^+$ cells can be observed patrolling the liver vasculature distal from the injury site; however, these cells are not seen to be recruited to the lesion. Vasculature labelled with FITC-conjugated anti-CD31 (green); RFP$^+$ monocytes (red). Injury site is located on the left side of the image.



Video 5. A spectrum of monocytes surround a focal sterile injury of the liver. 3D reconstruction from sequential z stacks obtained by SD-IVM of *Ccr2$^{RFP/+}$/Cx3cr1$^{GFP/+}$* mouse. Imaging of a focal sterile lesion 48 h after injury demonstrates the accumulation of a spectrum of RFP/GFP-expressing monocytes (red, orange, yellow, or green). Image compiled and rendered as 3D opacity models using the Volocity software package. Bar, 100 µm.



Video 6. In situ conversion of monocytes recruited to a site of injury. A 2 mm x 1mm biopsy punch containing the sterile injury site was harvested from a *Ccr2$^{RFP/+}$/Cx3cr1$^{GFP/+}$* mouse 24 h after injury, maintained at 37°C and 5% CO_2, and imaged. Images of the tissue biopsy were taken every 20 min and the resulting images were compiled into a time-lapsed video demonstrating the shift from red to green in individual cells.