

**Local and Circulating Endothelial Cells Undergo Endothelial to Mesenchymal Transition (EndMT) in Response to Musculoskeletal Injury**

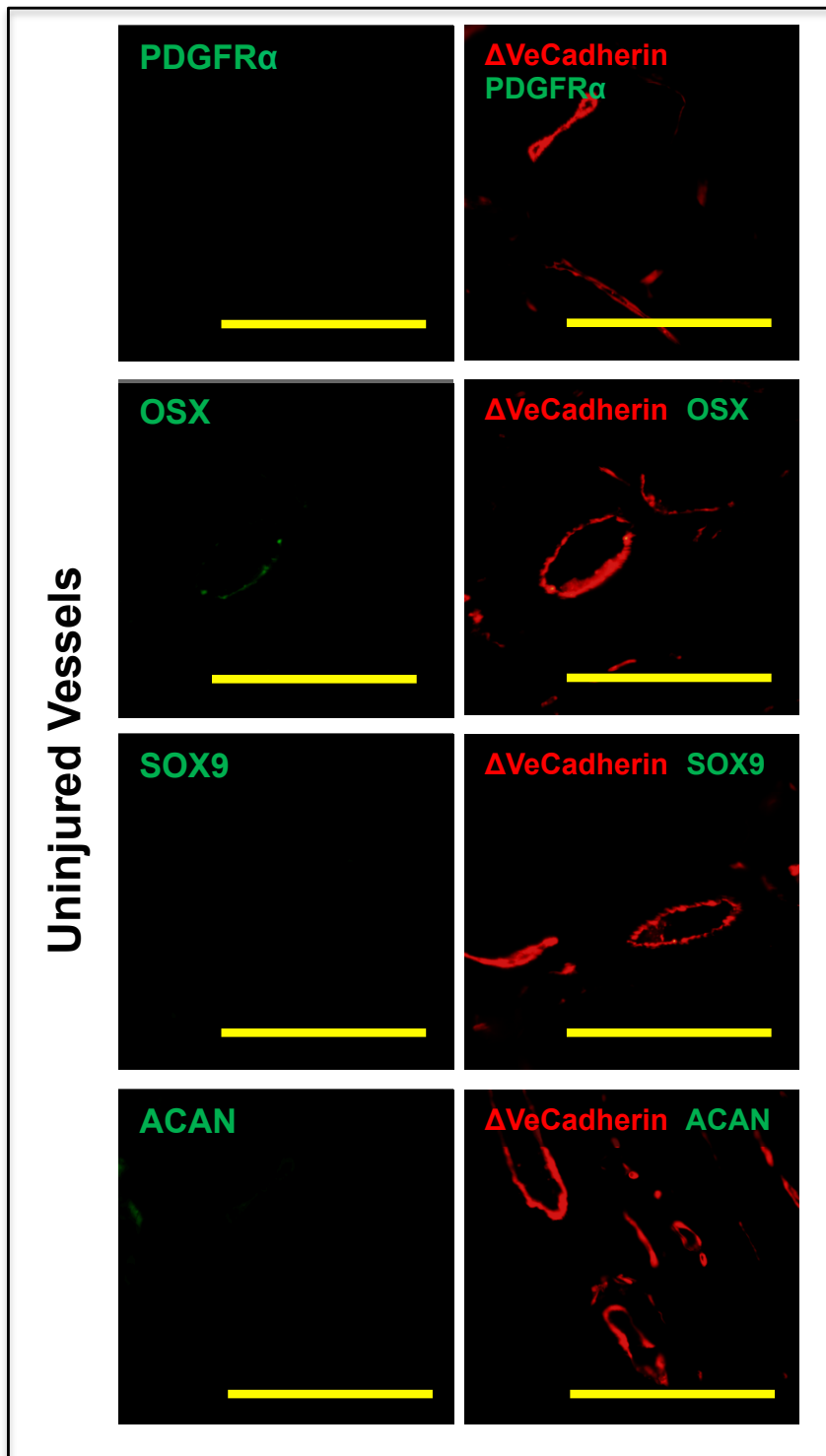
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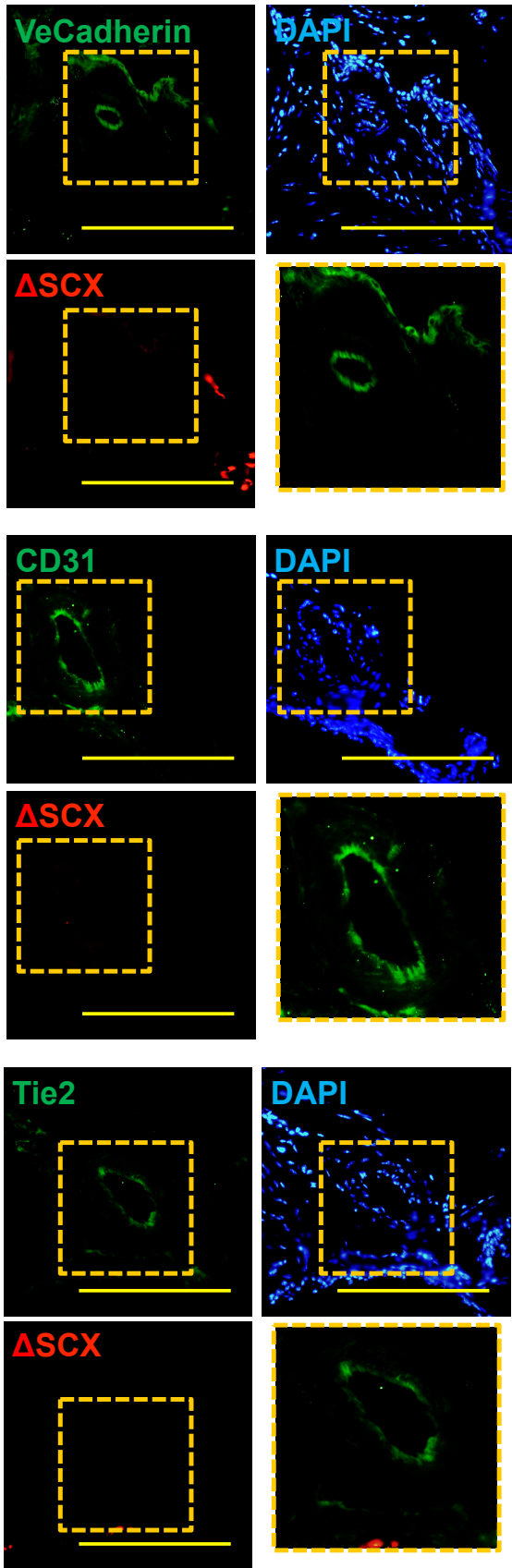
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SUPPLEMENTAL FIGURES

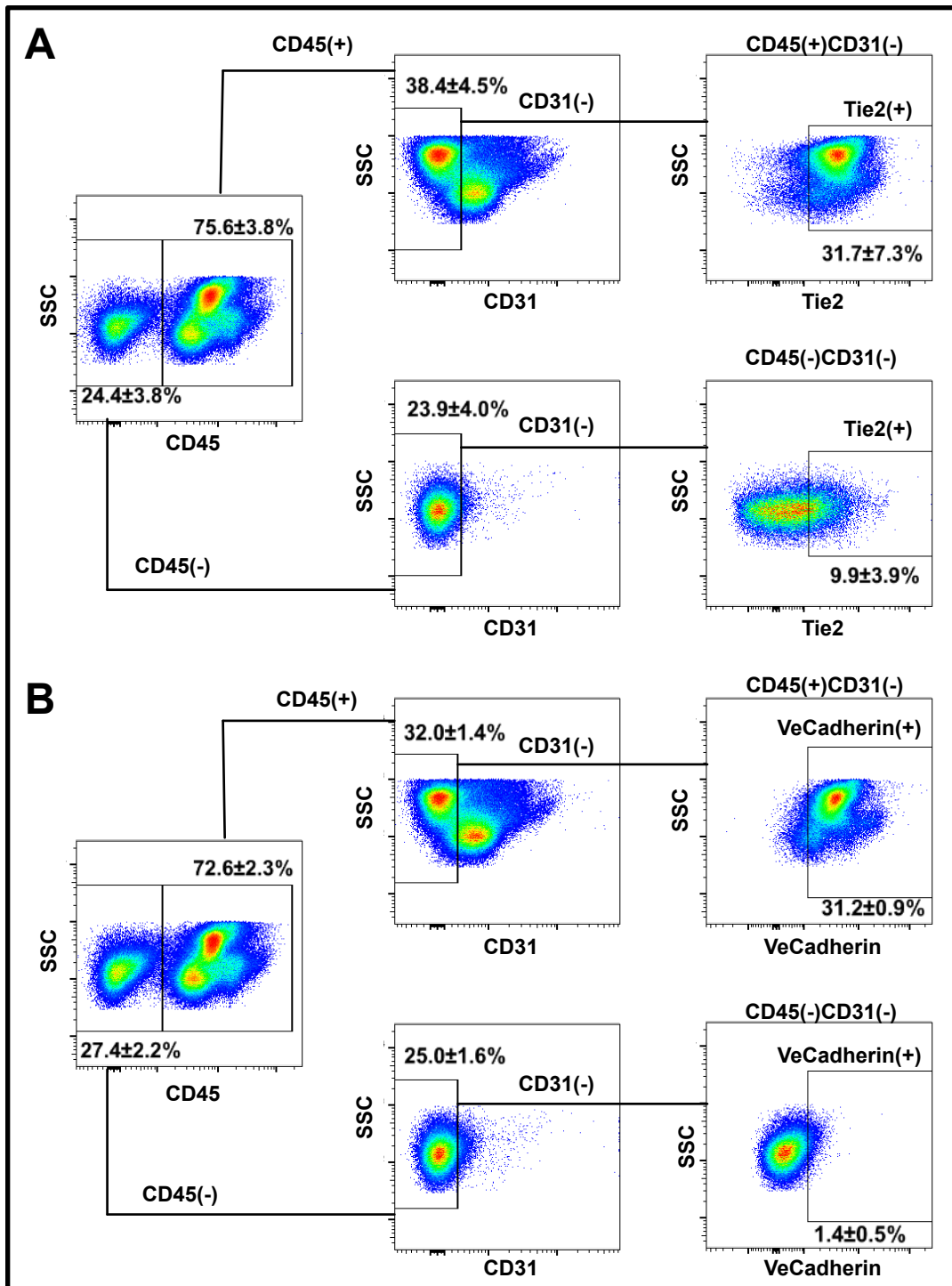


**Fig S1.** Endothelial cells (tdTomato;  $\Delta$ VeCadherin) from uninjured vessels do not express mesenchymal markers including PDGFR $\alpha$ , Osterix (OSX), SOX9, or Aggrecan (ACAN). Yellow scale bars = 200  $\mu$ m.

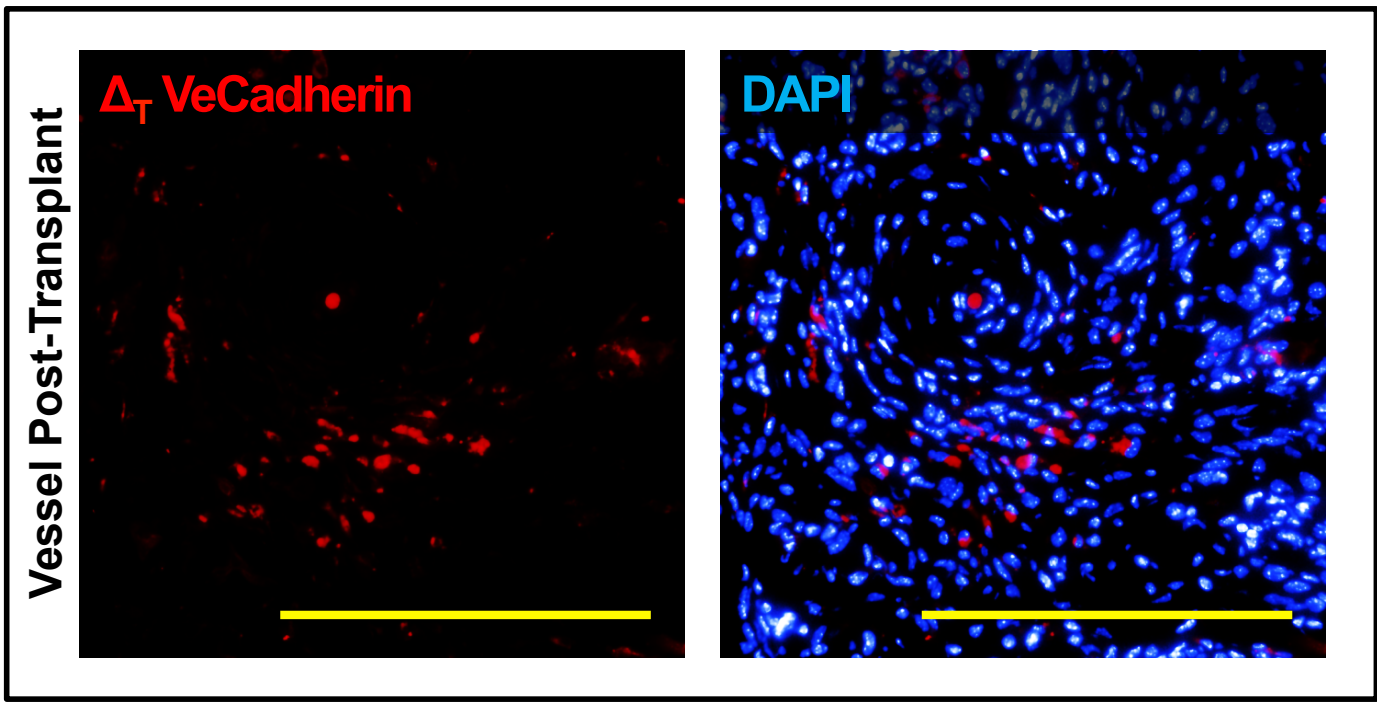
Uninjured Vessels



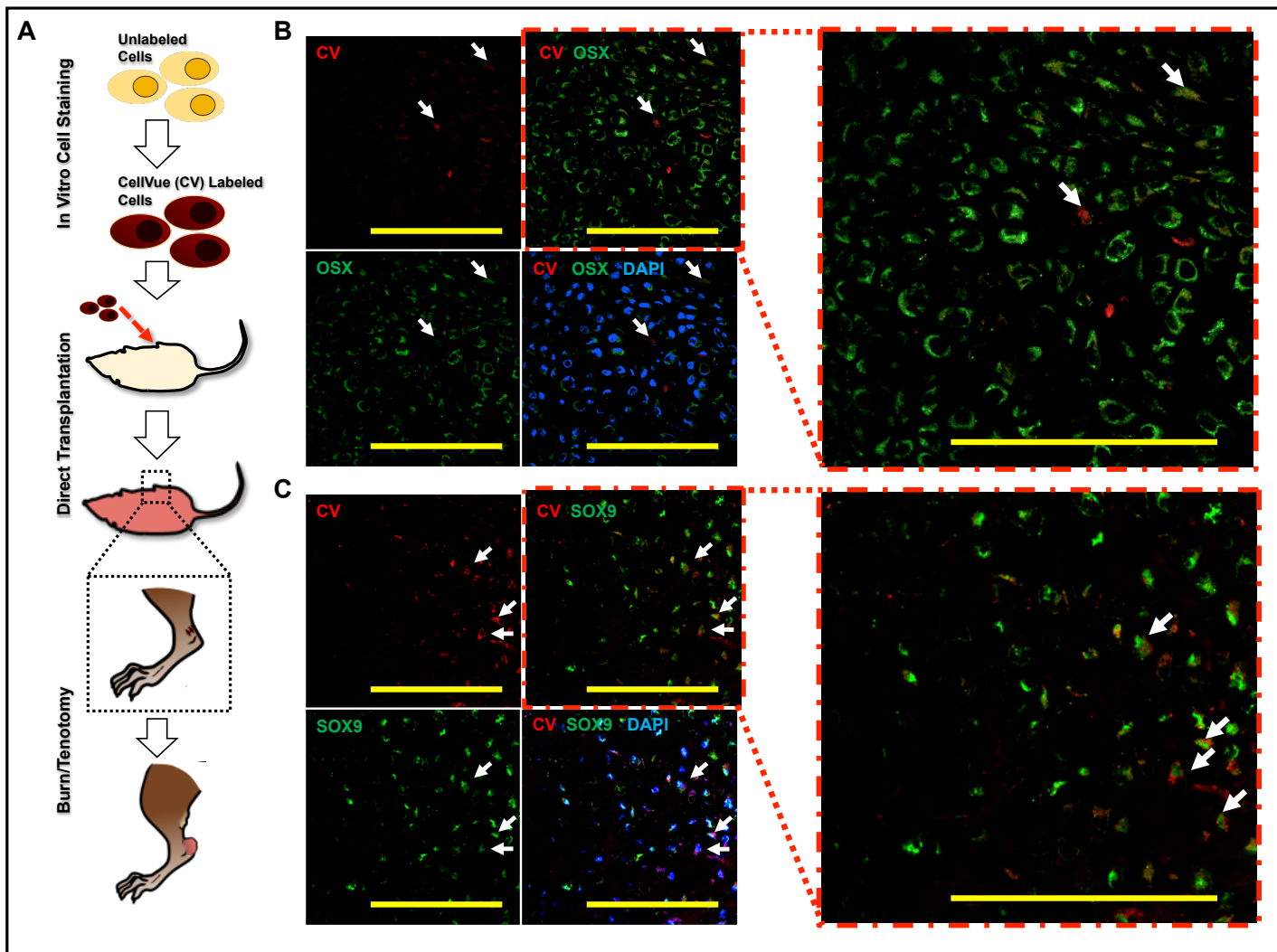
**Fig S2.** Uninjured vessels in the *Scx-creERT/tdTomato<sup>fl/fl</sup>* mouse express VeCadherin, CD31, and Tie2, but are not marked by tdTomato expression. Yellow scale bars = 200  $\mu$ m.



**Fig S3. Non-endothelial cells in marrow express endothelial-cell markers.** A) Non-endothelial cells in marrow express Tie2 (Tie2+/CD45+/CD31-: 31.7 +/- 7.3%; Tie2+/CD45-/CD31-: 9.9 +/- 3.9%); B) non-endothelial cells in marrow express VeCadherin (VeCadherin+/CD45+/CD31-: 31.2% +/- 0.9%; VeCadherin+/CD45-/CD31-: 1.4 +/- 0.5%) (n=3 mice/group)



**Fig S4.** tdTomato<sup>+</sup> cells isolated via FACS (tdT<sup>+</sup>/CD31<sup>+</sup>/CD45<sup>-</sup>) from the hindlimb musculature of uninjured *VeCadherin-cre/tdTomato<sup>f/f</sup>* mice are present around forming vessels post-transplant. All scale bars represent 200 μm.



**Fig S5.** A) Schematic showing method of direct cell transplantation of cultured aortic endothelial cells with CellVue (CV) labeling; B) CV+ endothelial cells are present within the cartilage anlagen and express Osterix (OSX); C) CV+ endothelial cells are present within the cartilage anlagen and express SOX9. Yellow scale bars = 200  $\mu$ m.