

**Supplementary Movie 1. Two-photon fluorescence image sequence showing the formation of a localized photothrombotic clot in a surface arteriole.** This is the same example shown in text figure 2. Images are displayed at a rate that is sped up by a factor of 15. The fluctuating, streaked appearance of the vessels is due to the motion of RBCs, and indicates flow. The initial direction of flow in the targeted arteriole (vertically centered in image) is right to left, branching into three vessels on the left of the frame. A saturated white strip at the top of the frame indicates irradiation with 523-nm light. Clot material is formed just downstream from the irradiated region of the vessel, and some sheds off and is carried away down one of the downstream branches. Note that after a complete occlusion is formed the streaked appearance is maintained in the downstream branches, indicating they are still flowing.