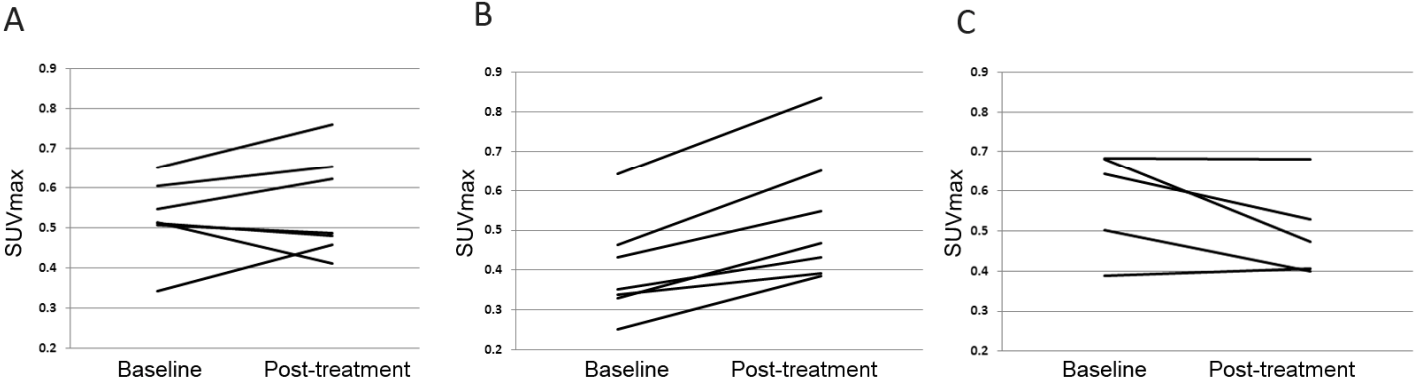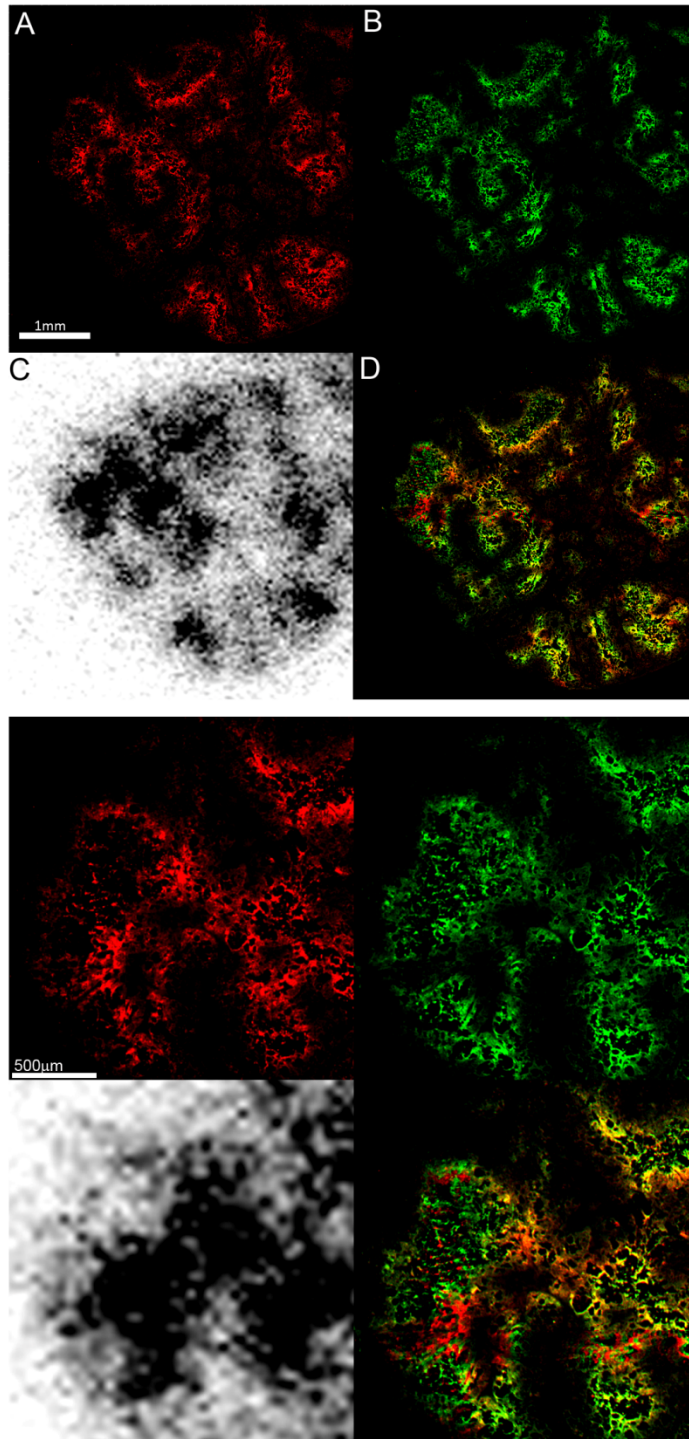## Suppl. Figure 1



**$^{18}$F-FMISO SUV$_{max}$ before and after treatment with DMXAA**

**A**, vehicle-only control tumors; **B**, DMXAA-1 group (as determined by SUV$_{mean}$); **C**, DMXAA-2 group (as determined by SUV$_{mean}$).
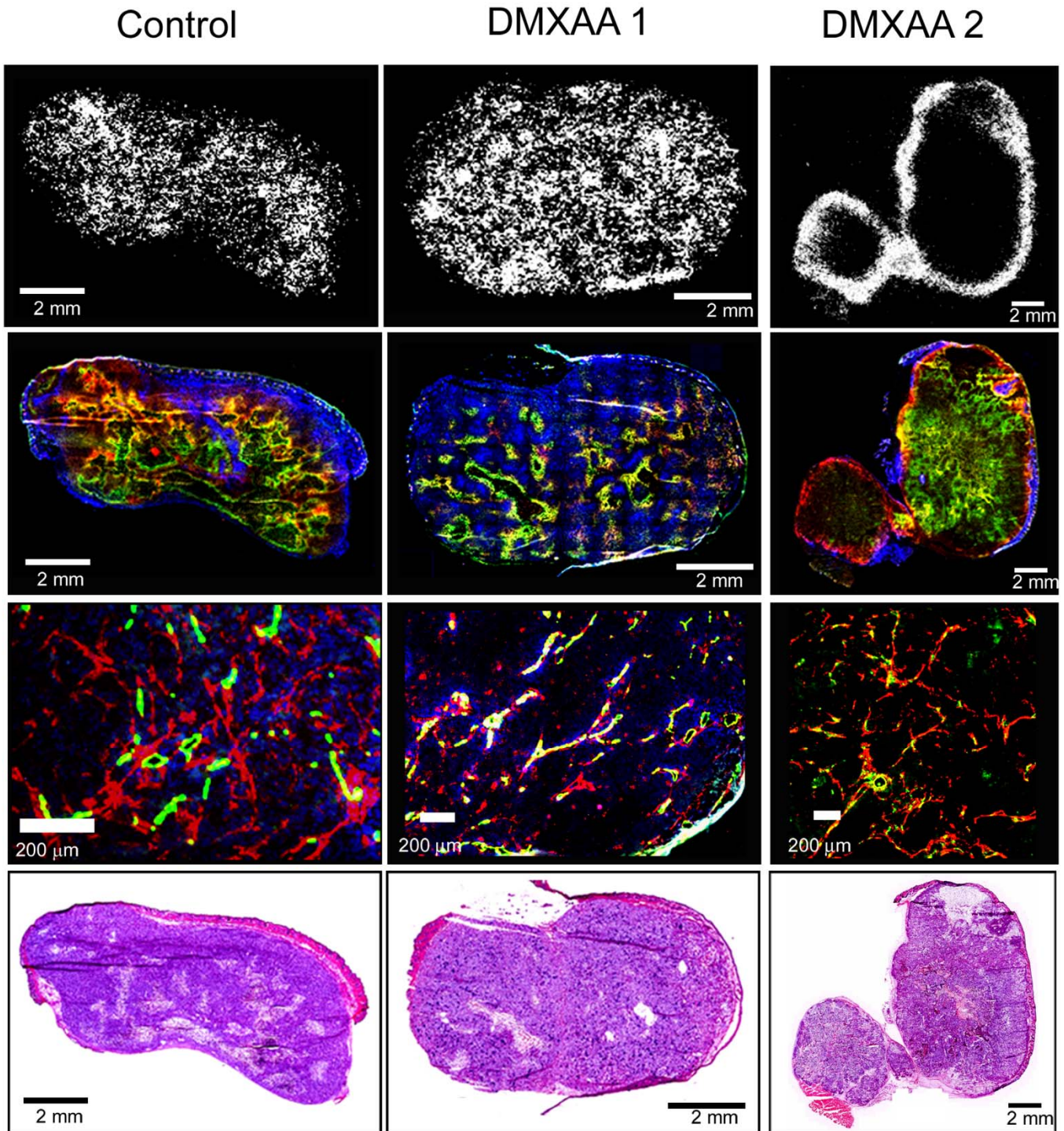
Suppl Figure 2



**Comparison of $^{18}$F-FMISO DAR and IHC staining of tumor hypoxia on an untreated (control) tumor at high resolution**

**Upper panel**: **A**, EF5 distribution; **B**, Pimonidazole distribution; **C**, $^{18}$F-FMISO DAR; **D**, Combined EF5 (red) and pimonidazole (green) distribution, colocalized regions in yellow.

**Lower panel**: as above, central region magnified.

# Figure 3



**Comparison of $^{18}$F-FMISO DAR and IHC staining of tumor hypoxia and vasculature**
First row: $^{18}$F-FMISO DAR; second row: composite fluorescence image of Hoechst 33342 (blue), pimonidazole (green) and EF5 (red); third row: composite fluorescence image of endothelial cell staining with anti-CD31 antibody (green), pericyte staining with anti-α-SMA antibody (red) and Hoechst 33342 (blue); fourth row: H&E stained sections.