**ONLINE FIG 1.** An illustration of the coregistration procedure used in cases with nondense clots. In cases in which the clot regions were not hyperdense, we used the validated software tool, 3D Slicer, to perform CTA and NCCT image coregistration via the BRAINSFIt algorithm. In the preregistration image, the *yellow and red asterisks* highlight landmarks in each image (yellow = NCCT, red = CTA) that are then fit together during coregistration (indicated with *asterisks* in the co-registered Image shown in the right panel). This sample case had a high coregistration accuracy, with MMI = 95.1%.
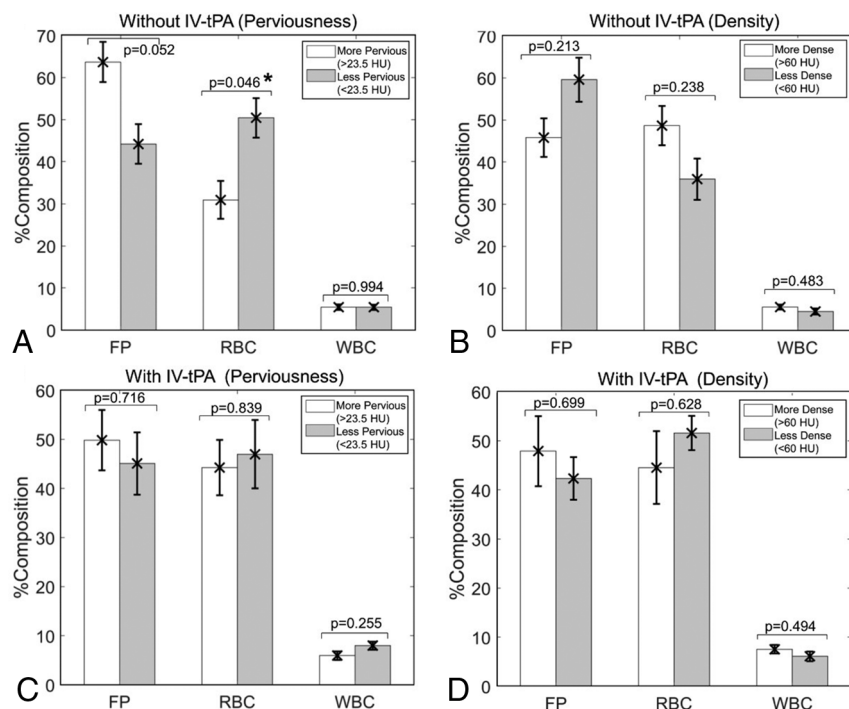


**ONLINE FIG 2.** Effect of tPA on perviousness trends. *A*, In patients who were not given IV-tPA, greater %FP and statistically significantly lower %RBC were still evident in higher pervious clots (>23.5 HU) compared with lower pervious clots (<23.5 HU). *B*, In patients who were not given IV-tPA, there was still no significant difference in clot composition between higher and lower density clots, but the trend remained similar to that observed in the entire cohort. *C*, In those who did previously receive IV-tPA, there was still greater %FP and lower %RBC associated with higher pervious clots (>23.5 HU), but the difference was less pronounced and not statistically significant. *D*, In those who did previously receive IV-tPA, composition was still not statistically different between higher and lower density clots. The *asterisk* indicates statistical significance (*P* < 0.05).
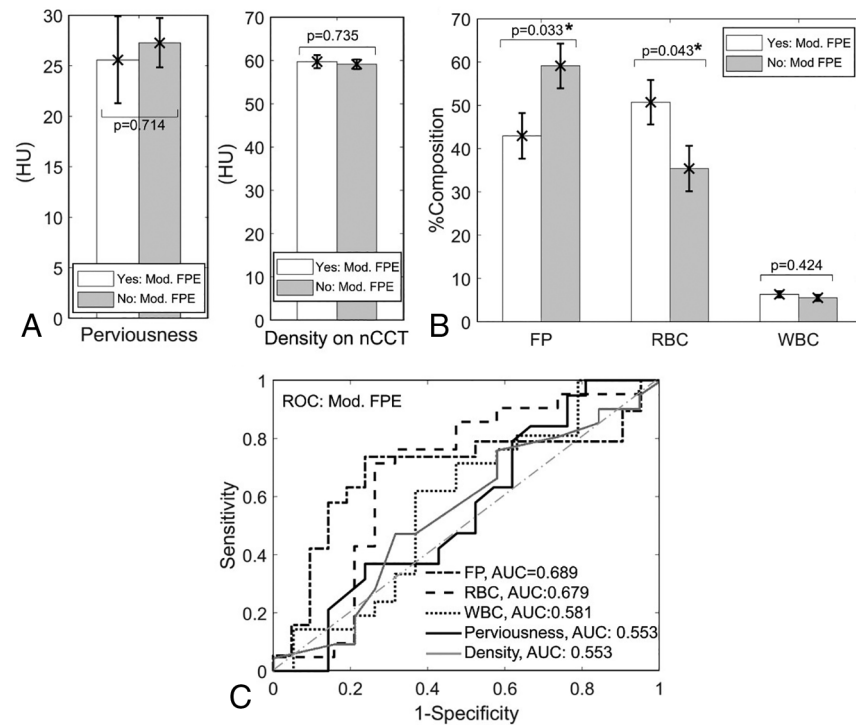
**ONLINE FIG 3.** Testing correlations of the modified first-pass effect with clot compositions and perviousness. *A*, Cases with a modified first-pass effect had slightly lower perviousness compared with cases that did not achieve a modified first-pass effect, albeit the difference was not statistically significant. There was no difference in clot density between cases that did and did not achieve a modified first-pass effect. *B*, Clots from cases with a modified first-pass effect had statistically significantly lower %FP and higher %RBC, as was shown when using a first-pass effect to define MT success. *C*, ROC analysis demonstrated that only %FP and %RBC had a marginal ability to predict the first-pass effect. The *asterisk* indicates statistical significance (*P* < 0.05).
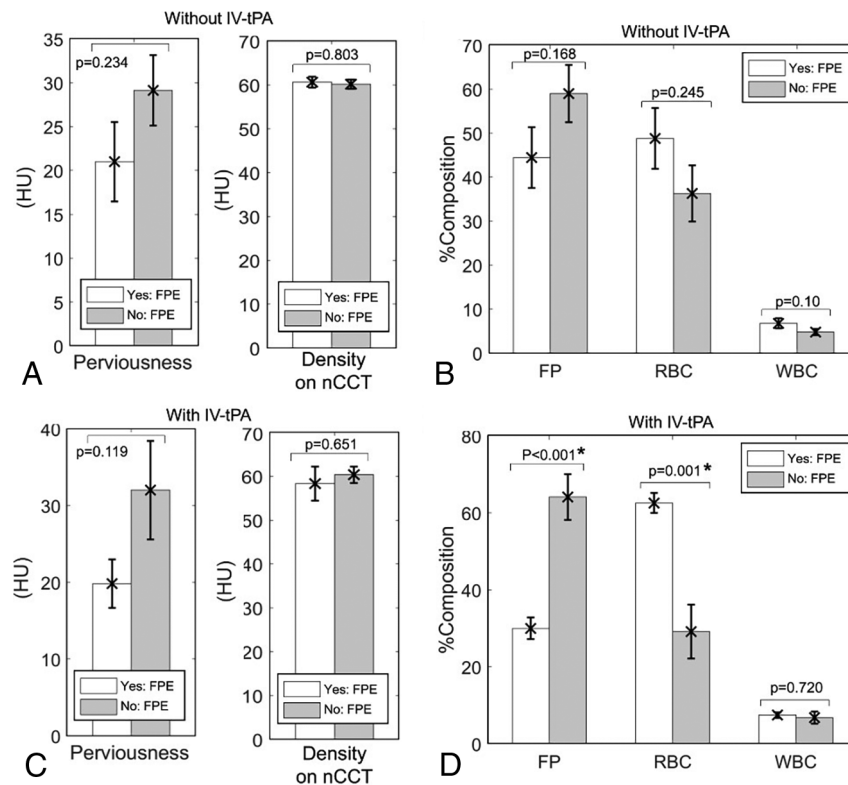
**ONLINE FIG 4.** Effect of TPA on first-pass effect trends. *A*, In patients who were not given IV-tPA, patients who had a first-pass effect still demonstrated lower perviousness. The difference was still not statistically significant. In these patients, there was no significant difference in clot density between those who did and did not achieve a first-pass effect *B*, In this subcohort, clots with a first-pass effect still had markedly lower %FP and higher %RBC, albeit the difference was not statistically significant. *C*, In patients in whom IV-tPA had been previously administered, the first-pass effect was also associated with lower perviousness (again, not significantly). Again, there was no significant difference in clot density between patients who did and did not achieve a first-pass effect. *D*, In this subcohort, clots with a first-pass effect had a statistically significantly lower %FP and higher %RBC as was seen in the entire cohort. The *asterisk* indicates statistical significance ($P < 0.05$).