Supplementary Figures

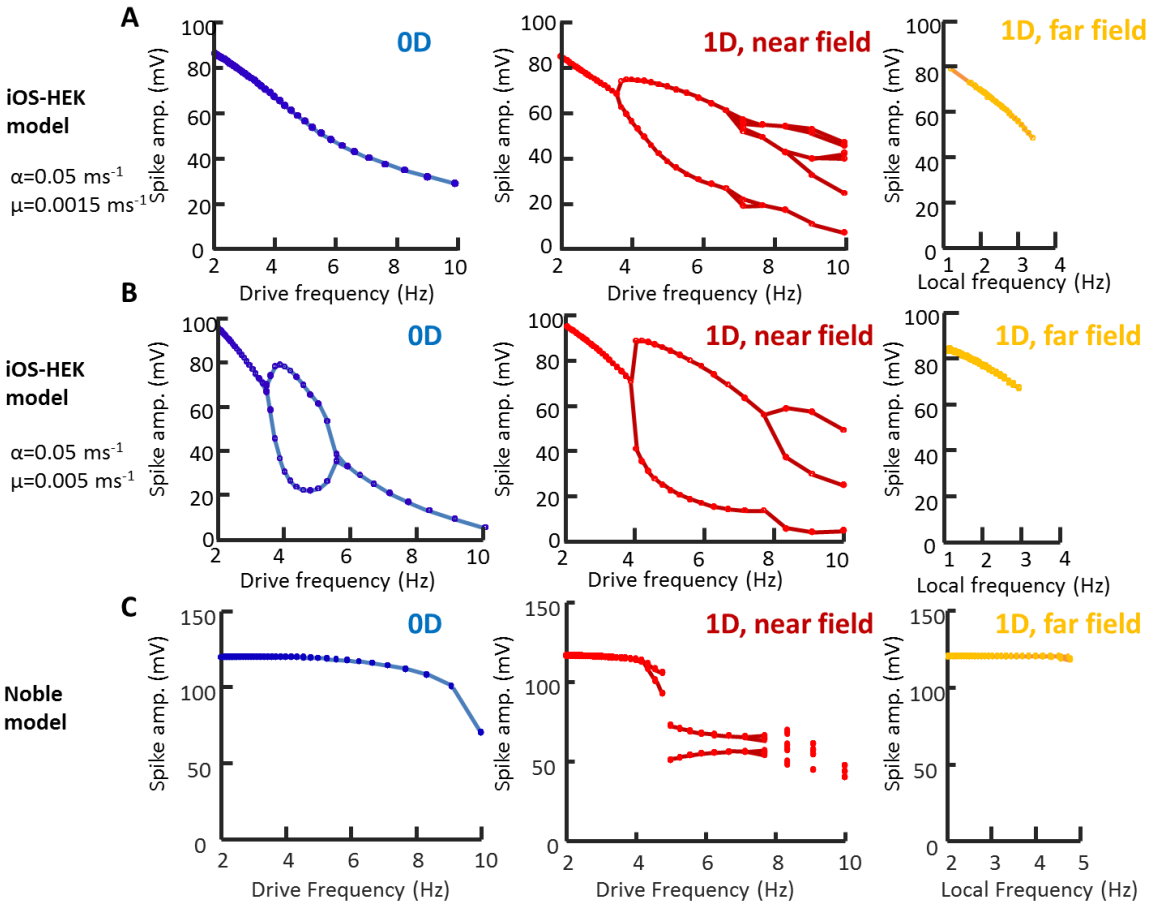

Figure S1. Geometry dependent instabilities in different numerical models of excitable cells, Related to Figure 3. A) Hodgkin Huxley model of iOS-HEK cells (same as Fig. 3c, repeated here for comparison to other models). B) Same as (A) with artificially accelerated israpidine unbinding kinetics (μ = 0.005 ms^{-1}). 0D features show alternans at intermediate drive frequencies. The 1D near field shows a discontinuous alternans transition. C) Simulation of the cardiac Noble model (Noble 1962), which also shows geometry-dependent changes in dynamics.

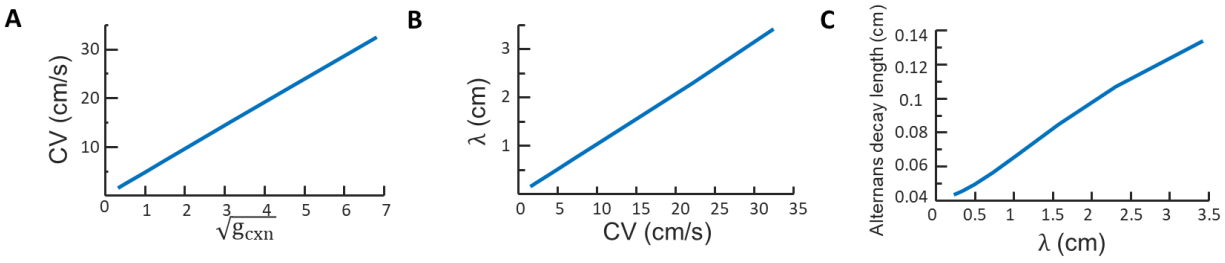

Figure S2. Effect of gap junction coupling on dynamics in Hodgkin-Huxley simulations of iOS-HEK cells, Related to Figure 7. A) Linear scaling of conduction velocity with $\sqrt{g_{cxn}}$. B) Linear scaling of depolarized pulse length, λ, with conduction velocity. C) Relation of the alternans decay length to propagating pulse wavelength at a pacing frequency of 5 Hz, far above the onset of alternans.