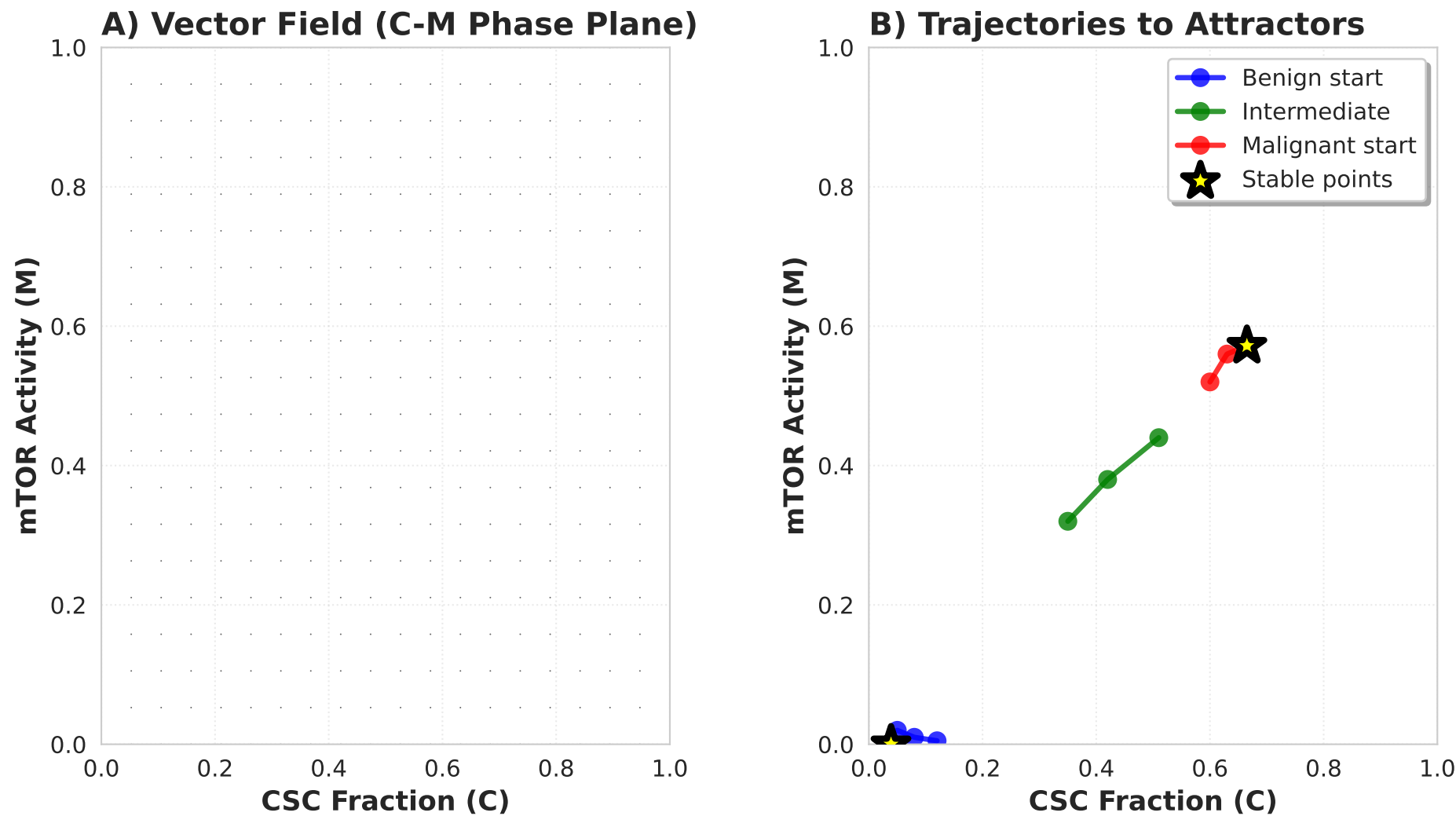


Figure 7: Phase Plane Analysis (C-M Space)



C) Interpretation

PHASE PLANE ANALYSIS

STABLE POINTS (Attractors):

- Benign attractor:  
C = 0.039, M ≈ 0  
Basin of attraction: C < 0.3  
Characteristics: Low CSC, low mTOR
- Malignant attractor:  
C = 0.665, M = 0.572  
Basin of attraction: C > 0.5  
Characteristics: High CSC, high mTOR

DYNAMICS:

- Two stable fixed points (bistability)
- Trajectories converge to nearest attractor
- No limit cycles (no oscillations)
- Unstable intermediate region (0.3 < C < 0.5)

FEEDBACK STRUCTURE:

- Positive feedback: M → C
- mTOR reinforces CSC state
- Creates self-sustaining loop
- Stabilizes malignant state

THERAPEUTIC IMPLICATIONS:

- Need to push system below C ≈ 0.3
- mTOR inhibition disrupts feedback
- Reduces basin of malignant attractor
- Enables transition to benign state